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THE MAGAZINE OF MOTION PICTURE PHOTOGRAPHY

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Filming action under the big top for "The Greatest Show On Earth."

THIS MONTH

- **Motion Pictures On Tape**
- **Trick Effects In TV Commercial Films**
- **The Making Of A Prize-winning Film**

DECEMBER
1951

PHOTO BY FRANK TANNER

Ready to "ROLL 'EM"

. . . another "take" on Du Pont "Superior" 2

"A Millionaire for Christy"—a Thor Production by Bert Friedlob for 20th Century-Fox—is another fine picture produced this year on Du Pont Motion Picture Film. Co-starred in this sparkling new comedy are Fred MacMurray and lovely Eleanor Parker.

On the set—and ready for a "take"—are Miss Parker, director George Marshall and the camera crew. Seated at the camera is Academy Award-winning cinematographer Harry Stradling, A.S.C.—long an enthusiastic user of Du Pont "Superior" 2.

"Superior" 2 is heartily approved by Hollywood's leading cinematographers. It's a superb panchromatic film that combines fine grain with speed and wide latitude. Du Pont "Superior" 2 is ideal for general studio interior and exterior work. For uniform high quality and excellent results with high- or low-key lighting, rely on this all-purpose negative rawstock. E. I. du Pont de Nemours & Co. (Inc.), Photo Products Dept., Wilmington 98, Delaware.

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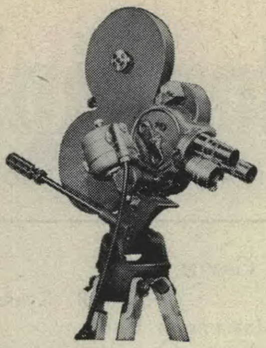

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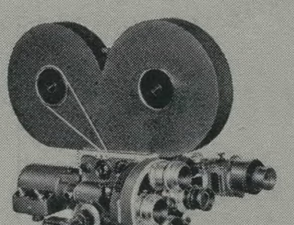
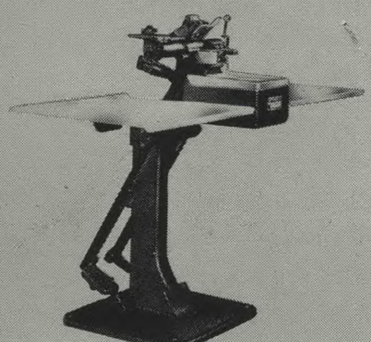


TRUE PROFESSIONAL. 2709-Special. 16mm adaptation of the 35mm camera long popular with Hollywood film studios. Meets the needs of the television field. Four-lens turret accommodates all TTH Speed Panchrotal lenses. Famous B&H fixed-pilot-pin film movement. 170° adjustment shutter with automatic or manual dissolve. 200-, 400-, and 1000-foot B&H 35mm magazines may be adapted. 35mm version also available, Model 2709-D.



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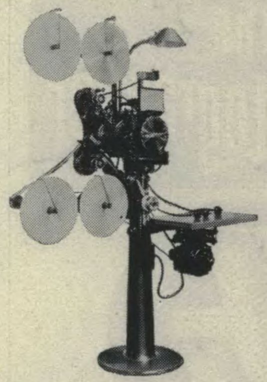

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ON THE COVER

THE GREATEST SHOW ON EARTH was also the greatest camera assignment for George Barnes, A.S.C. Here, the Technicolor camera mounted on far end of boom in foreground records story action, which was integrated with a regular performance of the Ringling Brothers & Barnum and Bailey circus. Producer-director is Cecil B. DeMille.—*Photo courtesy Paramount Pictures Corp.*

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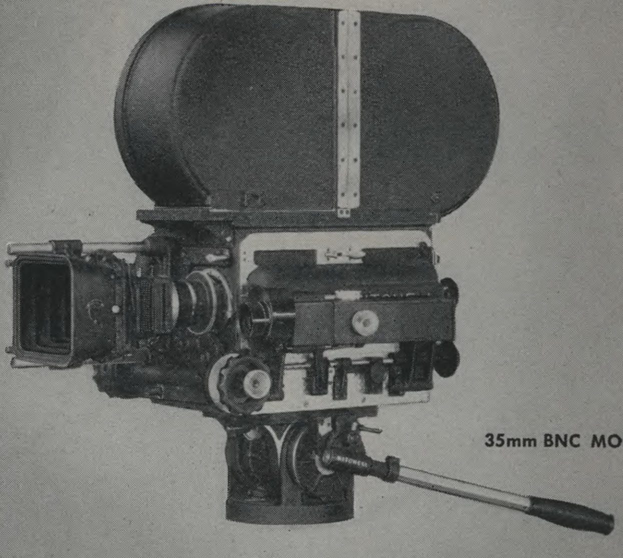

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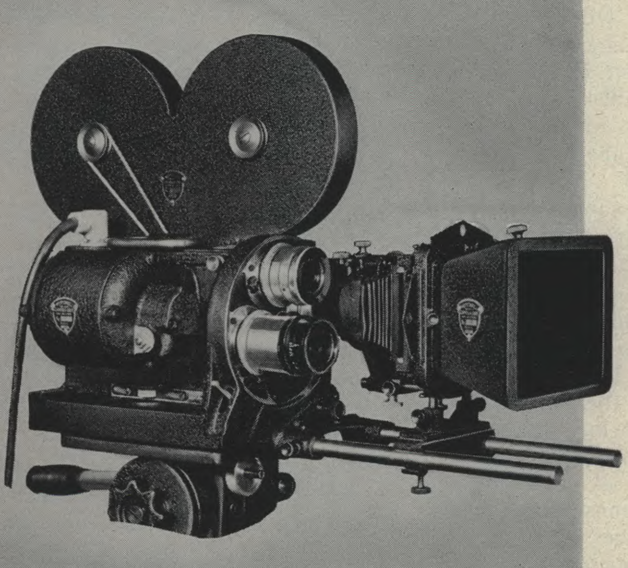

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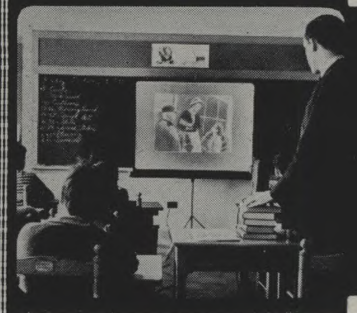

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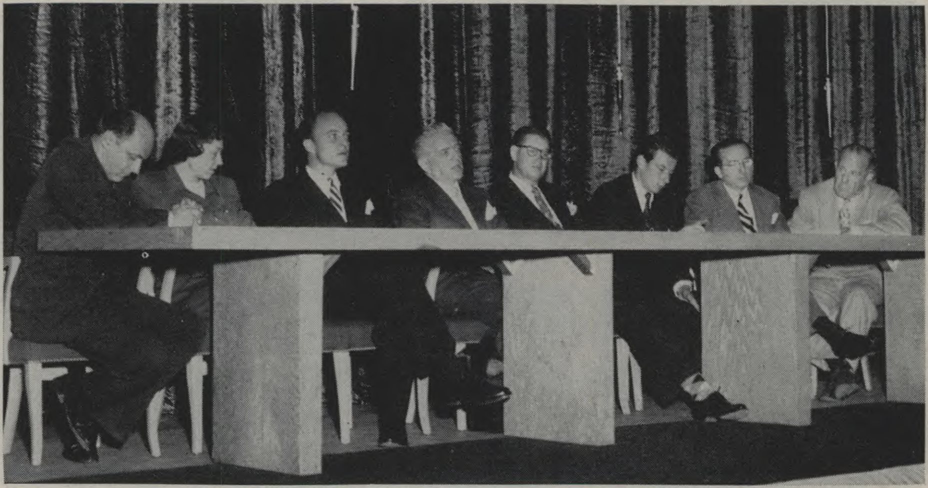

DISCUSSION FILM selected by Academy of Motion Picture Arts and Sciences for its November Film Forum was 20th-Fox's "Decision Before Dawn," photographed by Frank Planer, A.S.C. Pictured above is panel representing production crew: (left to right) Frank Planer; Dorothy Spencer, film editor; Frank McCarthy, producer; Anatole Litvak, director; Wm. Mittlestedt, mechanical effects; Noel Howard, art director; Franz Waxman, music; and Roger Heman, sound. Mel Ferrer acted as moderator.

Elected to the Board of Directors of the American Society of Cinematographers last month were Robert deGrasse and Sol Polito. New Alternate Board Members are Ernest Laszlo, Nicholas Musuraca and Joseph Ruttenberg. Executive vice-president Fred W. Jackman has announced that the Society's next annual election of officers will take place in April, 1952.

•

Membership in the Academy of Motion Picture Arts and Sciences will close temporarily on December 1st, and will not be reopened until after the first meeting of the Academy following its Annual Awards presentation next March. President Charles Brackett asks that present members wishing to sponsor new members must have the names presented before the Academy's Board of Governors at their next monthly meeting scheduled for early December.

•

Sylvia M. Roos, last month was elected to the Board of Directors of Kinevox, Inc., as Secretary-Treasurer. President and Technical Director of the company is Len Roos, A.S.C. The company manufactures the Kinevox synchronous magnetic film recorder and a wide range of associated equipment for use in motion picture production.

•

20th Century-Fox's new color film and the laboratory equipment used in processing it was demonstrated before members of the A.S.C. last month at the studio's Western Avenue projection room. On hand to describe the process and answer questions were Sol Halprin, Studio's camera department and film laboratory head, Earl Sponable, head of 20th's research and development division in New York City, and John Capstaff, Eastman Kodak Company research engineer.

Employing the new Eastman lenticular color film, the Fox development is aimed at giving the company its own studio-controlled color film production system. The negative requires no special camera, may be used same as any black-and-white film.

Demonstration reels of test footage of the new color film were screened during the session and later those attending were given a look at the new processing equipment which Fox recently built for handling the film. The studio hopes to start the first production using the new color film sometime next spring.

•

Ralph Hoge, head of Thomas Rentals in Hollywood, will shortly announce a new development in camera lenses which reportedly achieves remarkable depth of focus. Unlike other lenses which have been developed for a similar purpose, the Hoge lens is simpler and said to render better pictorial results. Lee Garmes, A.S.C., used the lens on a feature film production for the first time when photographing Aspen Productions' "The Tightrope," completed last month.

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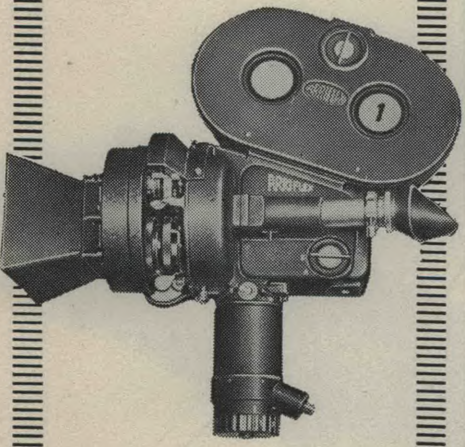
The ideal 35mm camera for newsreel, industrial, location, travel, expedition and scientific motion picture photography.



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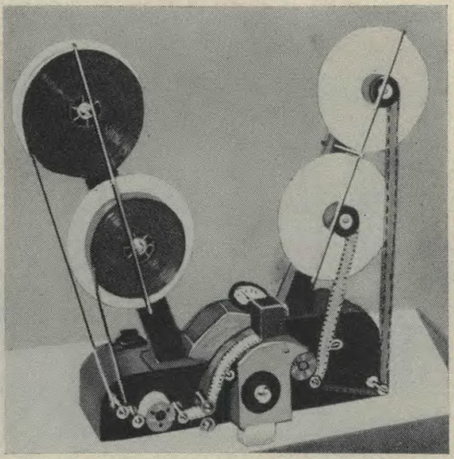
WHAT'S NEW

in equipment, accessories, service

MICOP CONTINUOUS PRINTER — S.O.S. Cinema Supply Corp., 602 West 52nd St., N. Y. City announces they have been appointed U. S. distributor of the Micop continuous film printer manufactured in Holland. The equipment is ideal for milcrofilmers, TV and industrial film producers, schools and colleges



Available for either 16mm or 35mm film, printing speed of the Micop is 25 to 35 ft. per minute. S.O.S. is also making available a high speed Micop with 90 ft. per minute capacity. This model is similar to the 1st model except for its higher powered lamp, blower cooling, and 1200 ft. flanges. Prices of Micop printers start at $995.00. Complete descriptive data is available from the distributor.

NEW "MART ADDRESS—The Camera Mart, Inc., New York City, moves to new and larger quarters December 1st. New address will be 1845 Broadway. New location gives Camera Mart greatly increased display space in addition to larger storeroom, repair and equipment servicing quarters. The company is one of the largest distributors of motion picture and TV production equipment on the east coast; also conducts an extensive rental service.

TITLES AND OPTICAL EFFECTS—Ray Mercer & Company, 4241 Normal Ave., Hollywood, have expanded facilities to service TV film producers with optical effects and titles. One of the oldest established firms in the business, the company has been supplying optical effects and titles to Hollywood's independent and major producers for more than 20 years. Company also services clients in the TV industrial and feature film industries in other centers of the U. S. Titles and effects for the award-winning TV film show, "Fireside Theatre" were produced by Ray Mercer & Co., whose facilities include complete sound stage, title printing and photographing equipment, and some of the most exclusive optical effects equipment ever designed. The company also manufactures a measuring rule for film editors that gives various frame counts in terms of linear feet for 8mm, 16mm and 35mm film.

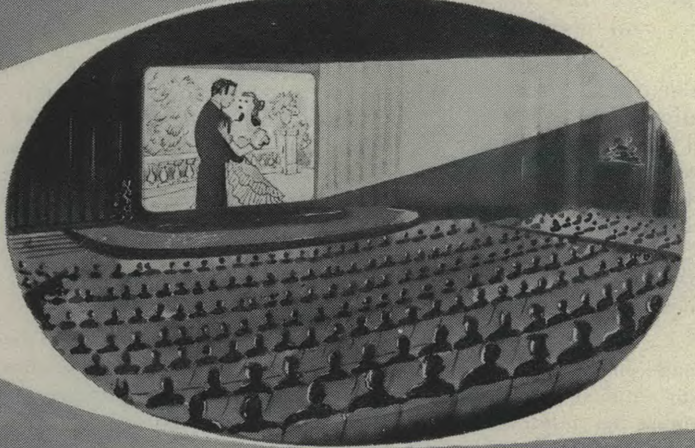
NEW ANSCO PROCESSING LAB—Ansco announces it has opened a new processing laboratory for servicing movie makers using its 8mm and 16mm color films. New plant is located at 2299 Vaux Hall Road, Union, New Jersey. New laboratory boasts one of the fastest 16mm color processing machines in use today. Within 24 to 48 hours from time customer's Ansco Color movie films reach the laboratory, they are processed and on the way back to the customer. Ansco emphasizes that its sheet, roll and 35mm magazine color films will continue to be processed at Binghamton, N. Y., as before.

SOUND PROJECTOR BOOKLET — Now available from Eastman Kodak Company, Rochester, N. Y. is a comprehensive booklet describing the features of Kodascope Pageant Sound projector and its use in audio-visual fields.

WIDE ANGLE LENS FOR EIGHTS—Bell & Howell Company, Chicago, announces a new wide angle lens for 8mm cameras. The 6.5mm (¼") f/1.9 lens admits 70% more light at full aperture than the ½" f/2.5 lens with Widor attachment. Special features of lens are: click stops, drop-in filter ring, and chrome plated mount. Aperture range is from f/1.9 to f/22. Price is $79.85.

On movie sets . . .

BETTER MOVIES!



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The "National" carbon arc offers advantages — in making movies in the studio . . . in projecting movies in theatres — *that no other light source can match:*

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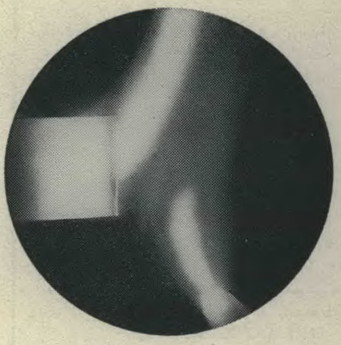

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1952

Amateur Motion Picture Competition

Closing Date For Entries — March 1, 1952

SPONSORED jointly by American Cinematographer and American Society of Cinematographers to select the "Top Ten" amateur films of 1951-52. Open to all amateur movie makers residing within the continental United States and its possessions.

ELIGIBLE for entry are 16mm and 8mm amateur-made films regardless of subject, either black-and-white or color, silent, or with sound on film.

AWARDS — The first ten films with highest rating in the judging will receive gold American Cinematographer Trophies. The ten next best will receive Honorable Mention certificates.

●

RULES

- Entries must be wholly amateur-produced.
- All sound films must be wholly amateur-recorded, regardless of sound medium used.
- Film length: maximum of 800 feet for 16mm sound or silent entries; 8mm entries, 400 ft.
- Sound medium (discs, tape, wire) must accompany film in same package.
- Entrants must pay transportation on films and sound records both ways.
- No film should be submitted before December 1, 1951. Both reels and reel containers, and containers of sound medium must bear labels indicating name and address of entrant.
- Entry blank must be submitted in advance.

WRITE FOR ENTRY BLANK TODAY, USING COUPON BELOW.

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1782 No. Orange Drive,
Hollywood 28, Calif.

Sir: Kindly send me official entry blank for AMERICAN CINEMATOGRAPHER'S 1952 Amateur Motion Picture Competition. I plan to enter an 8mm._____16mm._____ film, length __________ft.

Name ____________________

Address ____________________

City__________ Zone____ State________

KEEPING UP WITH *Photography*

ANY PHOTOGRAPHER who takes color pictures and often wonders why a very carefully determined exposure doesn't come up with perfect results will find the answer in a new method of exposure index determination for reversible photographic materials which has been developed by H. G. Morse of Ansco, Binghamton, N.Y.

In black-and-white photography, according to Morse, where a negative is made and then a print from this negative, the practice has been to "expose for the shadows and develop for the highlights."

With reversible films, such as 8mm and 16mm motion picture color films, 35mm and roll color films, proper exposure presents more of a problem. With such materials, the negative and positive images are created from the same emulsion, and processing is generally not variable. Exposure of the film in the camera determines the final quality of the image.

Since the image must be judged on its overall density, and at the same time its highlights must be relatively clear for the best brilliance and projecting characteristics it has been found advantageous, according to Mr. Morse, to base exposure index not on shadow values but rather on *medium highlight* values. According to Morse, no exposure index has yet been developed for best exposure determination of reversible films. The best bet for anyone shooting pictures on such film is to aim for medium highlights for best overall results.

●

HIGH-SPEED PROCESSING of motion picture film, developed by Eastman Kodak Research Laboratories, was demonstrated before a recent Photographic Society of America convention audience. During the convention, visitors were photographed in action with an ordinary 16mm cine camera. The film was then rushed to a rapid-processing machine. Here, through the magic of "hot processing," using heated chemical solutions, the film was developed, washed, dried and ready for projection in a matter of minutes. During the processing, a single frame of 16mm film moves through the machine in about 60 seconds.

Secret of the high-speed processing lies in the use of photo solutions heated to about 125 degrees F. When the film unwinds from special, quick drying drums, it is ready for projection. The new processing method is now serving the armed forces, television, and has long been in use at race tracks as a check on the fouling claims of riders, etc.

●

PICTURES OF GREATER SHARPNESS to the eye will ultimately come from new photographic materials as a result of a highly technical photographic investigation recently announced by the Kodak Research Laboratories in Rochester, N.Y.

Research on the way the human eye sees a picture, plus study of the physical structure of the photographic image, changes the generally accepted belief that resolving power can be used to rank photo materials in the same order of sharpness as visual judgment of pictures. The Laboratory marked as a mistaken view that, in general, high resolving power in a photo material means sharpness in the final picture.

Kodak scientists said their discovery provides photographic researchers with an important tool for further investigation of photographic materials.

●

THE BRIGHTEST CADMIUM mercury vapor lamp ever made in the U.S. — a 10,000-watt cantaloupe of quartz the length of a salted peanut, has been developed by Westinghouse Electric Corp. engineers for possible use in motion picture set illumination. The high brilliance of the short-arc lamp and its cool light of near-daylight color should qualify it for both spotlight and floodlight service in motion picture studios, according to Westinghouse engineers.

The lamp, described as an "instant starting source of high brightness electronic light," operates on an auxilliary circuit that makes possible instant restarting at peak brilliance.

●

SPONTANEOUS IGNITION of cellulose nitrat motion picture film can occur when such film is in an advanced stage of decomposition, according to research recently concluded by the National Bureau of Standards. Until recently, it was generally believed that nitrate film would not ignite spontaneously at temperatures ordinarily encountered in a film vault.

In eastern cities during the abnormally hot summer of 1949, numerous fires occurred involving nitrate motion picture films. The Bureau instituted in-

(Continued on Page 492)

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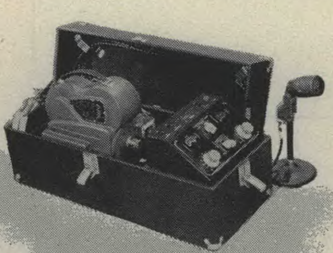

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MANUFACTURERS OF SOUND-ON-FILM RECORDING EQUIPMENT SINCE 1931

KEEPING UP WITH PHOTOGRAPHY

(Continued from Page 490)

vestigation of spontaneous ignition as an inherent hazard with nitrate film. Samples in various stages of decomposition were supplied for the purpose of simulating conditions which may have prevailed at the fire locations. Stored in a special chamber, with controlled and recorded temperatures, each film was packed in an individual can which was in turn wrapped in mineral wool to retain the heat of the exothermic decomposition reaction.

Results obtained in the NBS tests indicate that good film does not self-ignite at ordinary storage temperatures; that the logical approach to safe storage is the removal of all film showing signs of decomposition. Deteriorated film in the first and second stages is photographically reproducible. When the subject matter is important, the film can be copied and the original destroyed. Where decomposing film is not valuable, it should be destroyed at once. This may be done by submerging it immediately in water-filled drums, then removed and destroyed by burning in the open.

•

AN 8MM HIGH SPEED motion picture camera has been developed by the Wollensak Optical Company, Rochester, N. Y., capable of speeds of 25,000 frames per minute.

•

A COLLECTION of 238 exposure meters and exposure calculators of all known types is now a part of the photographic equipment display of the George Eastman House, Rochester, New York. The collection was accumulated by the late Joseph Bing, prominent New York consulting engineer and internationally-known amateur photographer.

The first attempts to determine exposure were by reference to past experience. Ingenious slide rules and tables put together the varying factors which influenced exposure—such as condition of the light at various altitudes, seasons and time of day.

The first meters to measure the amount of light made use of photosensitive material, usually a piece of photographic paper. The time required for the paper to darken to the shade of a standard tint was integrated on a slide rule with the other factors. This type "meter" was widely used about 1900.

Next in development was the extinction type meter, the photoelectric meter which measures reflected light, and more recently, the incident light meter.

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Whether your goal is the personal prestige of a trophy award . . . or the monetary reward of client satisfaction . . . achievement records of the world's leading cinematographers show that you are closer to reaching your goal when you use Baltar Lenses. This complete series, in eight focal lengths, gives you unsurpassed correction and definition for color and black-and-white 35mm films. All lenses are Balcote anti-reflection surfaced. Order from your professional camera manufacturer.

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HIGH UP on a camera boom, minus the camera, plotting camera angles for scenes in "The Greatest Show On Earth," are director Cecil B. DeMille, assistant cameraman Paul Hill, and cinematographer George Barnes, A.S.C.

Filming The Circus

Technicolor's new low-level color film plus Paramount's remote control incandescent lighting system eased the way for George Barnes in photographing Cecil B. DeMille's "The Greatest Show On Earth," saga of circus life.

By ARTHUR ROWAN

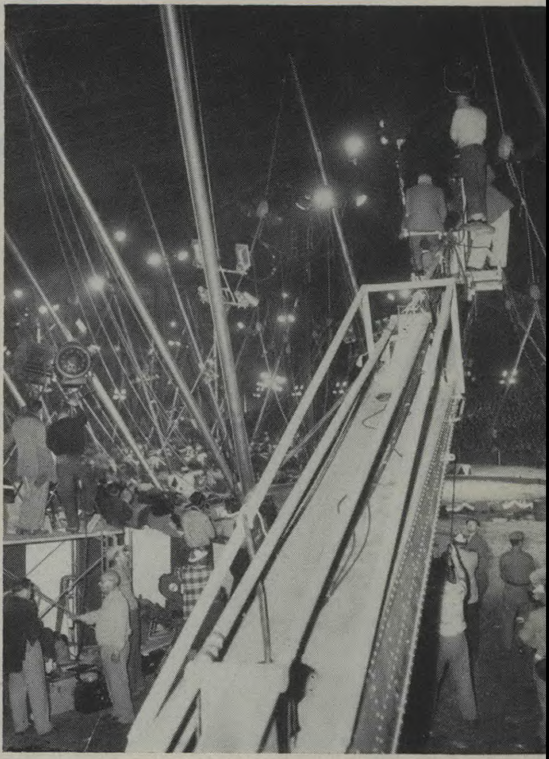
THE MERGER of Cecil B. DeMille and the Ringling Brothers & Barnum and Bailey circus is a reasonable product of an age which has yielded the atom bomb. Both are giants of showmanship and both have had a tremendous influence on American life. Paramount studio brought the two forces together in Hollywood two years ago when it paid a handsome price for the right to use the circus' name and equipment for what is perhaps its greatest production, *The Greatest Show On Earth.*

From the beginning, one thing was fairly certain. DeMille was not interested in doing a history of the circus, although some of it enters the script incidentally. Said he: "The circus on tour is a rich American heritage, a modern odyssey of people and of the lives of peoples. Of spectators, too. It is our aim to put that odyssey on a canvas of film, to capture the throb of the circus, its tragedy and humor and, if luck is with us, its universal soul."

When the "Circus Special" trained out of Hollywood last January 24 for *The Greatest Show On Earth* location at Sarasota, Florida, it carried one of the largest troupes ever assembled at Paramount. A month's shooting schedule was set for Sarasota, winter quarters of the Ringling Brothers & Barnum and Bailey circus, setting of the picture.

For DeMille and some of the production staff, this was not the first circus trek. A year earlier, DeMille and director of photography George Barnes, A.S.C., visited the circus quarters at Sarasota at which time they explored all the problems they might encounter in photographing the production. Problems not ordinarily met on normal locations nor in the studio confronted them — the most formidable, that of lighting. Because the laws of most states now prohibit use of any open-flame type lamp inside a circus or carnival tent, this meant no arcs could be used—that the whole vast tent interior would have to be lit with incandescent lamps. This looked like a discouraging situation until the problem was referred to studio engineers back in Hollywood.

It so happened that at the same time another factor was working in the studio's favor. For some months, Technicolor Corporation had been working on a new low light-level color film which would make possible shooting Technicolor productions entirely with incandescent lighting. They were prevailed



THE CAMERA invariably was mounted on a boom for every shot made inside the circus tent. The big problem always was to keep the camera and equipment from obstructing view of the spectators. An idea of the lighting achieved is also apparent here.

upon to make this new film available for *The Greatest Show On Earth*, the first major production incidentally in which it was used.

With Technicolor's engineers and those of Paramount studio now solidly united toward a common goal of making DeMille's epic picture possible, the company settled down to solving other production problems and getting the picture rolling.

At Paramount studio, Loren Ryder's engineering staff had developed a system of remote control lighting and a new light-weight lamp unit designed especially for the system. These were described in the November issue of *American Cinematographer*. The company was restricted to placing lights on the quarter-poles around the circus rings, but they couldn't send men up the poles each time the position or angle of the lights had to be changed. The answer was a method of remote control, and the method evolved worked perfectly.

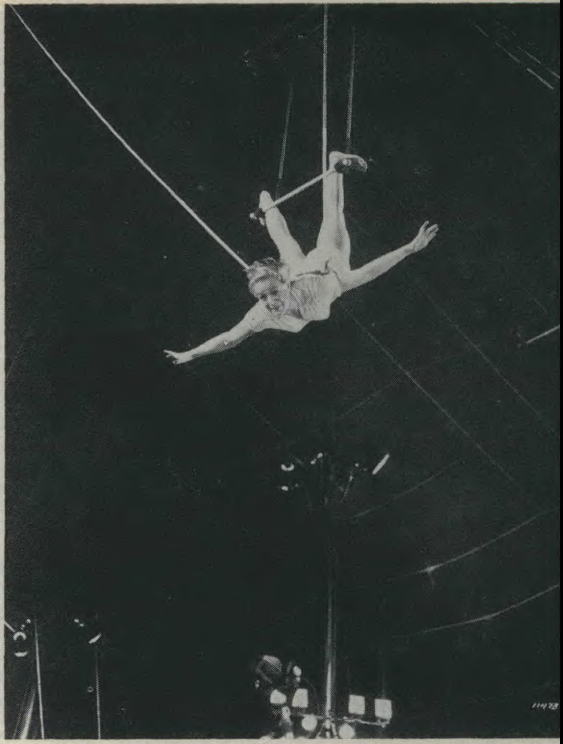
"Another important consideration," said cameraman Barnes, "was that all studio lighting units had to go up on the poles first — ahead of the circus lights. This meant our lighting crew had to work fast, integrating its work with that of the circus workers, so that we interfered as little as possible with the business of erecting or striking the tent."

No other color production made by a Hollywood studio posed the lighting problems faced by Barnes in photographing this picture. The biggest problem was light — volume of light. Consider a huge circus tent—a brand new circus tent, navy blue in color — and the fact the entire interior had to be lit during the shooting of most scenes, and you'll visualize what a demand this placed on cameraman and lighting crew.

Once the studio had perfected its new light-weight 5-KW lamp unit, it went into immediate production with it; and by the time the company was ready to begin shooting at Sarasota, there were ample units on hand to fill the lighting demand. This lamp, together with its remote control mechanism, has a total weight of only 32 pounds. The average 5-KW lamp weighs between 60 and 80 pounds. Fifty of the new units were supplied George Barnes for use in lighting the circus interior. The lamps were erected on the quarter poles in clusters of four, and were operable independently — that is, they could be lit or extinguished, tilted and panned individually from a remote control panel on the ground. The method of securing the lamps on the quarter poles was so simplified that they could be hoisted and fixed in place in a matter of minutes. Incidentally, there was no color temperature problems because CP lamp globes were used entirely for lighting.

"Technically," Barnes said, "the production of *Greatest Show On Earth* proved as tough as a steer's horn from lighting to meshing of schedules. We found that a circus must be lighted differently. The camera most of the time was shooting skyward — to catch aerial artists — a forbidden position where overhead lights are involved. With possibly one or two exceptions, we used no lights on the floor — in fact most of the time we couldn't, successfully. So our lighting had to be done with the remote-controlled overhead light units. Because these units also could be adjusted from full flood to spot, it was possible to obtain a wide range of lighting from a single unit, making it unnecessary for us to carry along several types of units. When we had to shoot Betty Hutton doing her trapese act, we made the long shots during an actual show, with the audience in the background. In photographing such scenes, every one of the fifty 5-KW lamps would be lit. Some would be throwing light on the audience, some on the circus floor, while a few would be tilted to light Miss Hutton.

"Closeups and intermediate shots of aerial action were made at Sarasota before the Big Show took to the road, or were made mornings when the show was on the road, before the public was admitted to the big top."



LIGHTING was complicated by the fact that the camera had to look skyward in shooting much of the action. Here Betty Hutton performs on the trapeze for an important scene in the picture.

ONE OF THE few down-on-the-ground camera setups used in filming action during an actual circus performance at Sarasota, Fla. DeMille, in foreground keeps an eye on the players. Jimmy Stewart, dressed as clown, is an interested spectator on the sidelines.

The studio supplied its own power for the lights. Three mobile gasoline-powered generators were shipped to Florida for this purpose and the generators went along with the show once it took to the road. The company put in seven weeks shooting scenes at Sarasota. While the winter quarters afforded ideal opportunity to film much of the picture unhampered by circus schedules and crowds of people, there was much of the action laid in real circus performances that demanded shooting with regular audiences for backgrounds and atmosphere.

"Here again we were met by the

(Continued on Page 522)

TINY DESERT FLOWERS, some having blossoms less than a fifth of an inch in diameter, are photographed by a Moody Bible Institute cameraman for a "Sermons From Science" film.

Science Films For Sermons

Moody Bible Institute productions had beginning in the amateur movies of Dr. Irwin A. Moon. Today, "Sermons From Science" films are screened the world over.

By ARTHUR L. MARBLE

SOME OF THE most intriguing cinematography seen today appears in the 16mm color films produced by the Moody Institute of Science by a little known group in a modest studio not far from Hollywood. Purpose of the films is to bring to non-theatrical audiences little-known wonders of nature to point up the fact they were created by a divine power.

Head of the Moody film production unit is Dr. Irwin A. Moon, an enthusiastic former amateur movie maker and one-time preacher, whose scientific interests have lead him into a wide variety of adventures with a movie camera, such as making sound film recordings of deep sea fish for *Voice Of The Deep*, or going aloft with his camera in a P-38 to film a rain-making project for *Hidden Treasures*.

Prints of Moody science films have been made in 13 languages, and have been screened in all parts of the world. They are a favorite among the men in our armed forces, not only because of their technical excellence and subject matter, but because they combine and present in non-sectarian manner two subjects of universal interest — science and religion. The film production activities of the Moody Institute of Science are sponsored by the parent organization in Chicago, Moody Bible Institute, which trains religious leaders and missionaries for various Protestant and Jewish churches.

Housed in a three-story former Masonic Temple in West Los Angeles, the Moody film studios resemble a modern scientific laboratory. Here is all the equipment — both scientific and photographic—used by the institute to photo-

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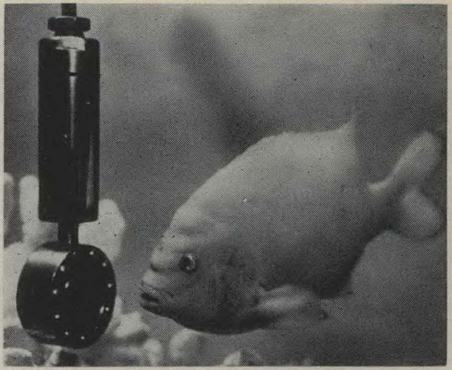
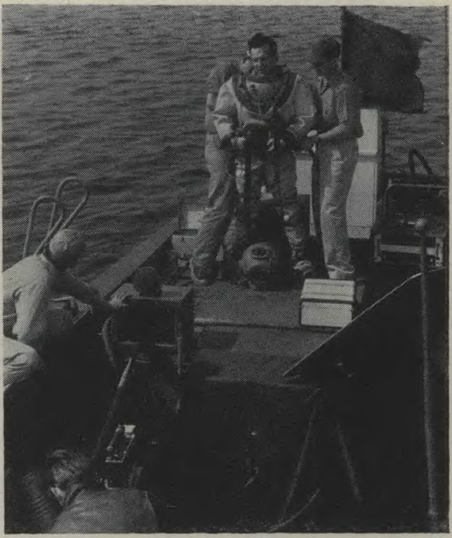
MUCH of the Institute's film studies are of plant growth or insect activities, for which time-lapse photography is employed.



MOST interesting is film and hydrophone sound recording of deep sea fish, proving fish do have a language of their own.



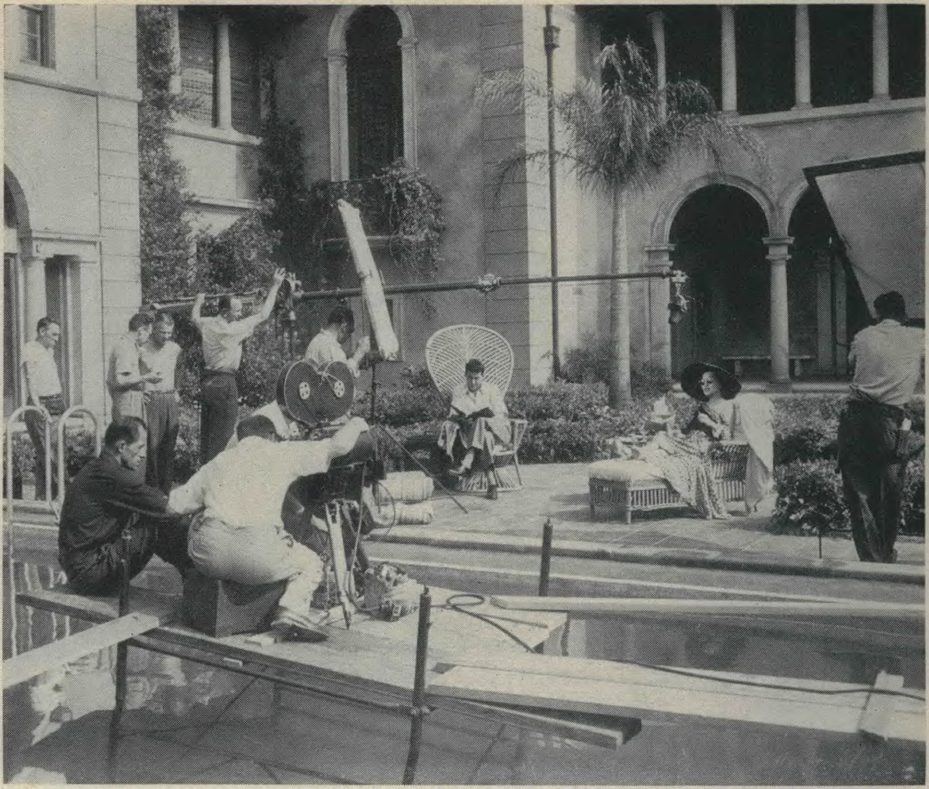
DR. IRWIN A MOON, in diver's suit, prepares to submerge to photograph life in ocean's depths.

RIGHT—Institute-built animation crane makes possible production of animation sequences equalling the best of the professional studios.

THE ARTICLE that begins on this page is the first in a series written by members of the Screen Producers' Guild in Hollywood, and dealing with the producer's view of film making. While the editorial content of American Cinematographer customarily is devoted to the photography of motion pictures, there is increasing evidence that more and more of our readers are vitally interested also in topics dealing with other phases of film production.

For them we hope this series will prove of substantial value. The articles bring to the film maker not only the viewpoints of the producers but reveal a great deal of pre-production planning and activity that precedes actual photography of a picture; and while all this is related to the production of professional films, what Hollywood producers have to tell about their side of the business should prove highly educational for the cinematographer — amateur as well as professional.

The author, Charles Bracket, is President of the Academy of Motion Picture Arts and Sciences, and a member of the Board of the Screen Producers' Guild. Famous for his production of such pictures as *The Lost Week End*, *To Each His Own*, and *Sunset Boulevard*, he is now producing and writing at 20th Century-Fox Studio.—EDITOR.



"AS WE WENT along with 'Sunset Boulevard,' our sympathies became deeply involved with the woman who had been given the brush by thirty million fans. At the end, we had to give her the only happiness we could see for her—the twilight happiness of the mad."

Putting The Picture On Paper

The process of screen writing cannot be driven too hard. It's up to a producer to find writers who, besides knowing their job, are honest and conscientious — for his picture's success depends on what they set down on paper.

By CHARLES BRACKETT

THE PROJECT has been set. It has been determined that a certain novel or play or screen original or idea is strong enough to bear the weight of twelve reels of celluloid. Then comes putting it down on paper.

In speaking of every step down the long line of picture-making, I'm sure my confreres are saying "Here's the place not to economize—here's the spot to shoot the works." About putting it down on paper, I make that statement with the deepest conviction.

There is a story about the early days of picture-making — a nightmare story for writers. A producer had just hired a writer. He gave him a brand new pencil, looked at him with pleading eyes and said, indicating an inch-long stub of pencil, "Tonight down to here?"

The process of writing cannot be driven too hard. It's up to a producer to find that his writers, besides knowing their job, are honest and conscientious. His picture depends on what they set down on paper—"The jokes," as the pages are called, rather grimly, in the studios. Writing is concentration—and if intelligent minds don't concentrate on the picture at this stage, you're going to have nothing.

We producers have been urged to get down to actual cases in this series, to tie up our remarks with pictures you readers have seen and with actual experiences. Therefore, shucking aside all reticence, I'll confine myself to the experience of the writer I know best—me.

As a screen writer, I've never worked alone, and I'm going to discuss the methods of writing scripts Billy Wilder and I used for many years, and which Walter Reisch and Richard Breen and I now use.

That method begins with talk—seemingly endless talk—but all of it directed towards the project. Any story can go in a lot of directions. You have to explore the ones which appeal to you, before you find the one you are going to use. Usually you find yourself with complete outlines for several pictures before you make your final choice. There's one scene you love in one version—another in another version. Can they be reconciled? If not, one of them has to go. It has to be jettisoned completely, not to blur the new line. I call this talking part of the job of filling up the reservoir, and the reservoir should be full to the top before writing begins.

During the talk, the characters have been getting clearer. The only reliable peg I know on which to hang a story is a character. If you can get a central character with real blood in his veins, and strong desires and a pair of feet that really walk the earth, you've got a picture. If you can get such a character

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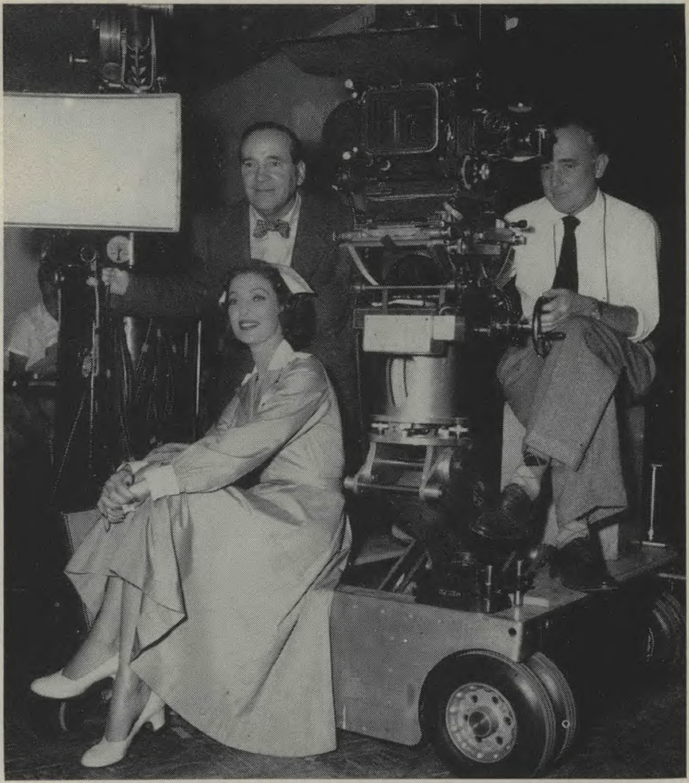
Double Exposure

What happens when a first cameraman works under a director who once was a cameraman himself.

By CHARLES WEBB



TWO of the industry's top flight cameramen contributed to the success of Columbia Pictures' "Paula" — Charles Lawton (right) who directed the photography, and Rudy Mate (left) who directed the picture. Star of "Paula" is Loretta Young shown here watching proceedings on the set.

TO THE LAYMAN, the announcement that a director of photography had been assigned to work under a director who at one time had held that job himself, would mean a situation fraught with roman candles.

That was the spot in which Charles "Buddy" Lawton, Jr., A.S.C., found himself when he was assigned as first cameraman on Columbia's *Paula*, starring Loretta Young. He was doubly exposed, first to the usual vicissitudes of getting the action and mood of the drama properly on celluloid, and second to working under a man who knew as much of the technical side of photography as he did. Rudy Mate was to be the director, one of the very few members of the American Society of Cinematographers who ever have forsaken their cameras for a megaphone.

Mate is the product of the silent days of picture-making in Europe. More recently, as cameraman, he has filmed many of the Rita Hayworth starrers, including *Cover Girl* and *Gilda*. His last directorial effort, *When Worlds Collide*, is currently running in London and is said to be the city's biggest hit in ten years.

Lawton has been at Columbia seven years and in that time has been director of photography on twenty-five films, most of them top budget releases. Like Mate, he, too, has photographed Rita Hayworth, in *Lady From Shanghai*. His last prior to *Paula* was *Boots Malone*, starring William Holden.

With that set-up, even the initiated might surmise that anything could happen. Temperaments could clash no matter how careful each man might be to avoid it. That they didn't is a tribute to both the ability and the stability of each man.

Having exposed what the layman might think of the situation, what did each one of these workers think?

Says Lawton: "Although in the broader sense, first cameramen of necessity must follow a certain routine procedure, still, every one of us has developed his own way of doing things. I've known Rudy well over the years. He's a fine fellow, a great cameraman and director. However, I suppose it was only natural for me to wonder a little if my work was going to please him, dovetail with his ideas and

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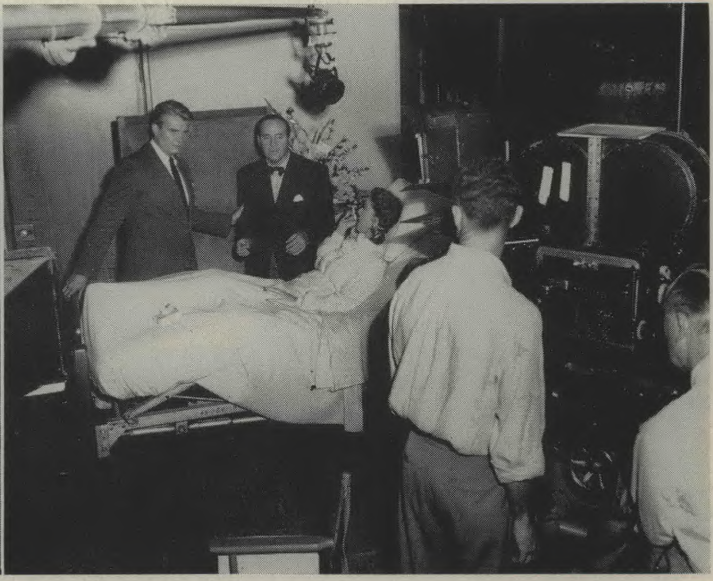
ONE REASON Mate and Lawton proved to be such a cooperative team during the filming of "Paula" is the fact that they held many preproduction conferences before actual filming began.



"RIGHT FROM the start," says Lawton, "Mate and I were in perfect accord about how the camera and lighting should express the mood of this human, emotional drama."

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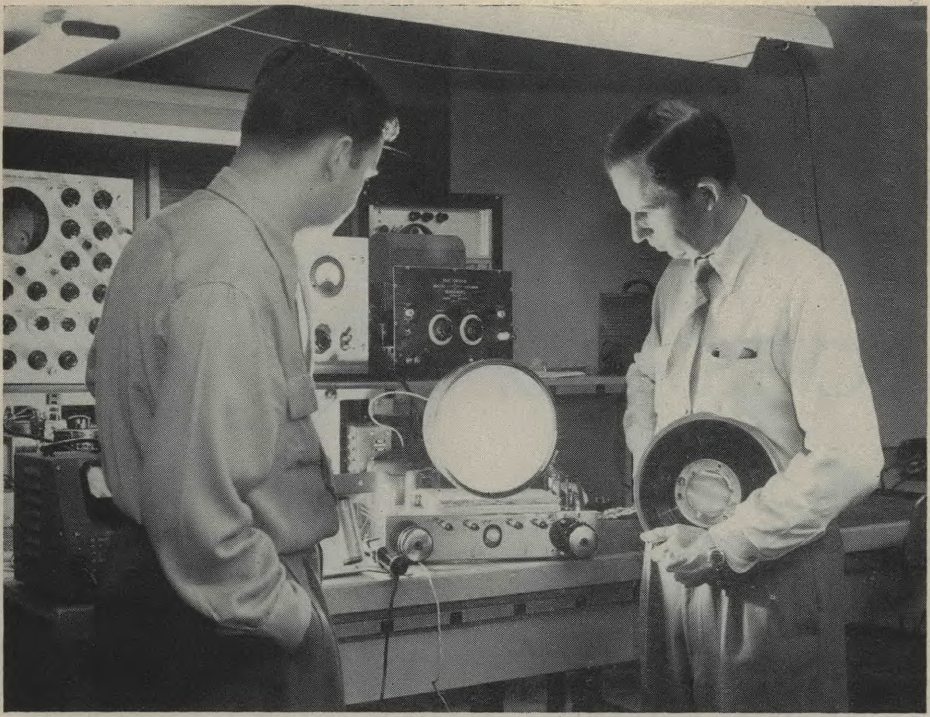

CO-DEVELOPERS of a new electronic device that makes possible the inscribing of motion pictures on tape like a sound recording are Wayne R. Johnson (left) and John T. Mullin. They're looking at an ordinary television tube by which the picture is received. System was shown to press in Hollywood recently. (Acme Newsphoto)

Motion Pictures On Tape

Magnetically recorded motion pictures, demonstrated publicly in Hollywood for first time, promise big changes in the production of TV and feature films.

By FREDERICK FOSTER

THE PRODUCTION of motion picture images on magnetic tape is a subject which you will be hearing and reading about a great deal from now on. Some idea of its possible impact on the motion picture industry is contained in an editorial on the subject by W. R. Wilkerson in his trade paper, *Hollywood Reporter*, for November 15th, part of which follows here:

"Want to do a little guessing on the TV-motion picture problem as it pertains to production, distribution and exhibition?

"Here's a picture of things to come, part of which is already past the experimental stage, the remainder to be put on the planning boards before another year rolls by.

"In the not too distant future, theatres all over the world will be able to turn on a switch and receive their picture programs, via closed air waves, broadcast direct to their screens from the production stages here in Hollywood, a main broadcasting plant elsewhere, or many others in important distribution sectors.

"There won't be any projection booths, there won't be any film exchanges with their shipping departments and film examinations because there won't be any film. The motion pictures of tomorrow will be on tape and the exhibitor will get his shows, not out of cans via American Express, but from the ether waves. Instead of running a single picture for a day or week or longer, he will have a different picture every two or three hours and every theatre within his part of the country will be running the same program.

"Sounds fantastic, doesn't it? Half of it's guess, the other half real.

"Tape recording of sound and images is already here. It's just a question of perfecting the medium. Once that's perfected, it's then only a question of working out the details of closed circuits for TV and lining up the theatres, which will, of course, eliminate quite a few, and get them equipped for the reception of their pictures over the air to complete the whole scientific revolt."

The production of motion pictures on magnetic tape, about which Mr. Wilkerson wrote, moved a step nearer to reality last month, when Bing Crosby Enterprises, Inc., in Hollywood demonstrated for the press its electronic filming system. This is a method by which both picture and sound are recorded magnetically on tape for motion picture theatres and television. At present, the Crosby development is concerned mainly with its application to television — a business in which Crosby Enterprises is already pretty well established, using conventional motion picture mthods.

In the demonstration, a new magnetic recording head capable of absorbing pictures, sound and color on a single plastic tape, took pictures off a home television receiver of a motion picture film being televised. The head transmitted the images onto a quarter-inch magnetic tape for rebroadcast later. Images in the rebroadcast were fuzzy but comparable to results obtained with early TV receivers.

The inventors, John T. Mullin and Wayne R. Johnson, who developed the new magnetic recording head under the supervision of Frank Healy, head of Bing Crosby Enterprises' electronics di-

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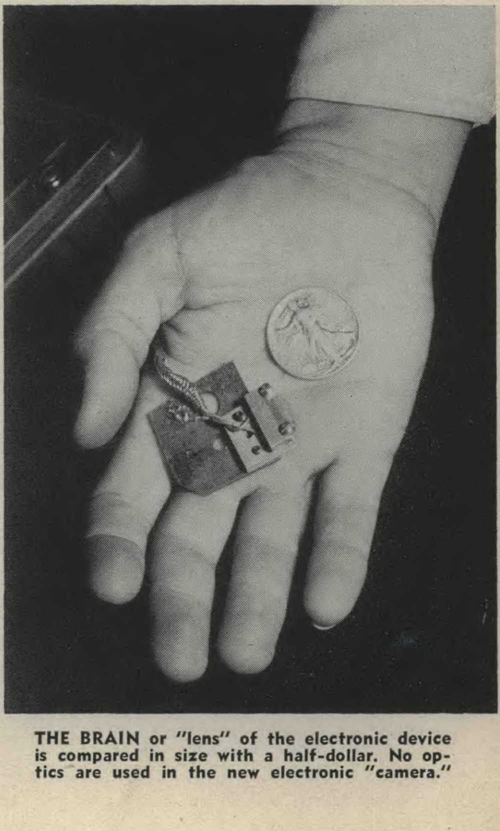

THE BRAIN or "lens" of the electronic device is compared in size with a half-dollar. No optics are used in the new electronic "camera."

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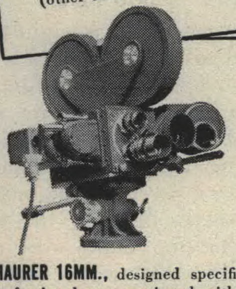

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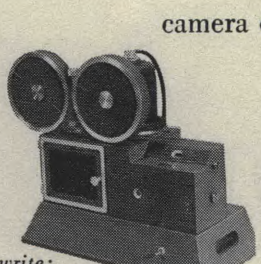

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Trick Effects In TV Commercial Films

Video spots benefit from those cinematic techniques that compress compelling action fully and effectively within the limited time allotted television commercials.

By JOHN H. BATTISON

Author of "Movies For TV"

THE FORMAT of the short television commercial film differs from that of the theatrical film mainly in that the whole object of the film is to promote or sell a product or service, frequently by repetitious presentation of its image. The object, of course, is to plant in the mind of the viewer both the trade-name and utility of the product quickly and impressively. Trite and corny cliches must be avoided(and almost any visual demonstration can become a cliche) as must exaggeration. There must be a measure of entertainment or educational value in the TV spot film — yet not to the extent that the viewer is so busy enjoying the presentation that he forgets the product, and more — to buy it!

As a general rule, therefore, TV commercials are more effective as well as cheaper to produce if they are simple. Yet sometimes the briefest of commercial spots are the most difficult to execute. One, which the author calls to mind, had to do with a popular brand hair dye and involved a "before and after" demonstration. Altogether it consisted of sixty seconds of film, opening and closing with animation, and with the live-action demonstration in between. The latter involved appearance of two women, one at a time, showing their hair while the narrator extolled the virtues of the dye. We used the split-screen technique in photographing the models — a matter which presented something of a problem. The presentation called for a grey-haired woman to appear on one side of the screen watching her "double" apply the product which gradually transformed her grey hair into a beautiful lustrous dye job. The procedure had to be telescoped into the brief space of fourteen seconds.

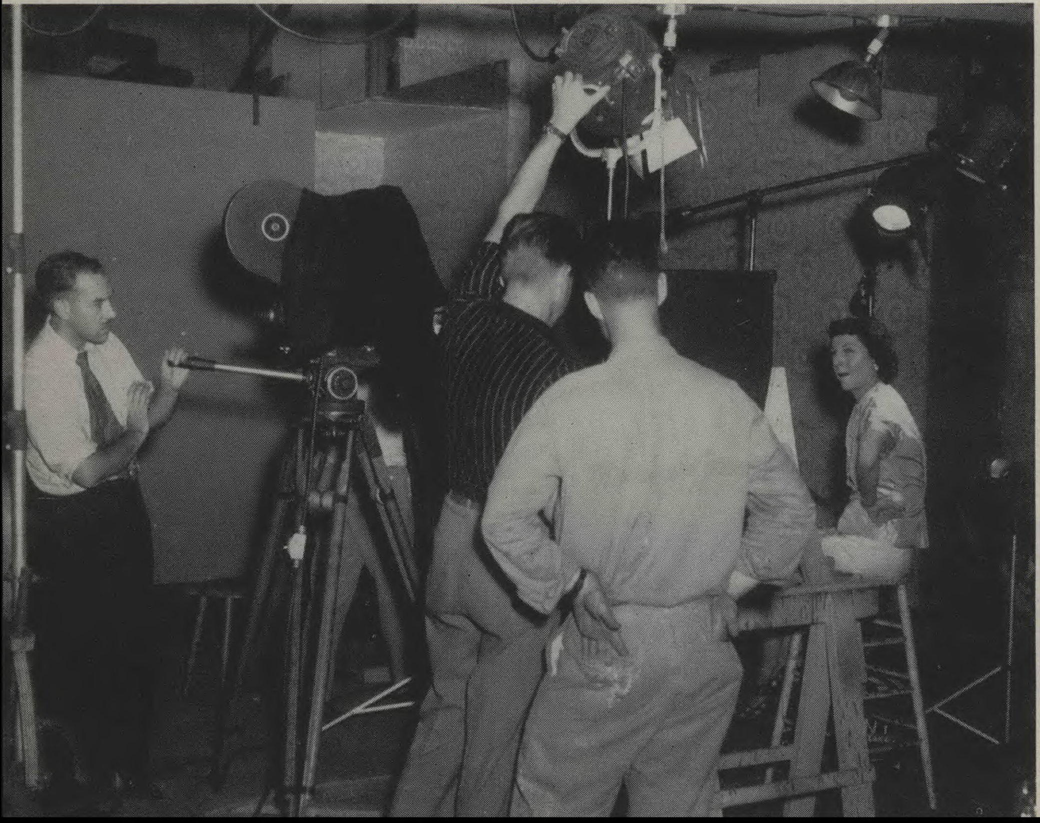
Our first thought was to fake the "transformation," using a pretty brunette for the model and powder her hair with zinc sulphate to give it the appearance of grey hair—then wash it out to give the appearance of dyed hair results. However, the client's insistence for complete honesty in the presentation as well as possible conflict with the Federal Trade Commission rules, precluded our following such procedure. So we sent out a call to the casting offices and tested models from more than a hundred talent agencies before we found the right woman for the part—grey-haired and willing to undertake the dye transformation.

We had to be particular both as to model and the dyeing procedure, since the preliminary takes of the dye process had to be good. If they were not, we were in trouble because we couldn't "undye" the model's hair and begin all over again.

Readers may find interest in the manner in which we photographed these split-stage scenes. The camera setup is shown in the accompanying photo, and while much of the detail is obscured by the two men in the foreground, the photo shows the camera, with a black cloth partially covering its matt box, and the large sunshade some distance in front of the camera one-half of which was masked off for the split-stage effect. The model is seated at the right, beneath the studio lights.

The camera was rigidly secured on a tripod to insure against even the slightest movement during filming. Ahead of it the large frame or sunshade was masked off across the diagonal of the opening with a large black card. This was very carefully aligned so that it cut off exactly one-half the picture frame. The "before" shots were made with the left side uncovered, and the "after" shots on the opposite side.

To complicate matters, the producer's script called for the camera to dolly out during the filming of the "before" shot, and to dolly in on opening the "after" shot. Because this would mean disturb-



SETUP employed by author in photographing a hair dye demonstration for a TV spot, using split stage. Obscured by technicians in foreground is large frame covered by black cloth and forming a giant matt box. Large black card in front masked one half of the frame area.

ing the rigid setting of the camera, so necessary to making the split-stage shots in the camera, we resorted to the alternative of "dollying" our subject. This was done by placing her on a chair mounted on a camera dolly, and having a grip move the dolly as required.

Although the "before" and "after" procedures were filmed split-frame, each procedure was photographed on a separate strip of film, then combined in the final printing to insure accuracy in matching up the two areas in the film frame. It would have been possible, of course, to shoot the two sequences on a single strip of film by using a camera provided with a masking slot behind the film. Our main reason for not following this method was to insure success of the production and avoid the necessity of having to do it over. In other words, were we to shoot the "before" sequence, then wind back the film and shoot the "after" action on the other side of the film frame, and that action was flubbed, we would then have to start all over again, beginning with the "before" sequence. The professional producer of commercials with his costly production time, simply cannot gamble with such methods even though they are reasonably productive of success.

While we are on the subject of commercials for hair treatments, it is interesting to note still another innovation which we employed in the production of a spot announcement for a popular brand shampoo. We call it the "product wipe" and involves the old familiar-wipe-off procedure briefly popular in professional films a decade ago. We simply made a thirty-two frame wipe with a bottle of the sponsor's product, wiping over the frame from left to right. The first scene showed hair dingy and drab. The scene following the wipe revealed the model's hair glimmering and smartly dressed after use of the sponsor's product. Optical effects such as this play a large part in the production of effective TV film commercials. END.

ROLE OF motion pictures in Television is reviewed in a recent issue of *Highlights*, Eastman Kodak publication for stockholders. The article states in part: "At least 30% of all TV programs now on the air are on film. This percentage, moreover, is rising as the advantages and methods of using films become better known.

"For 1951, TV will use an estimated 300 to 350 million feet of motion picture film. Most of this will be black-and-white 16mm film; the rest 35mm . . . Interestingly, a number of producers are currently shooting TV films in color. These are printed in black and white for telecasting now. But, when needed, they'll be ready for use again on color telecasts."

Television Film Production

By LEIGH ALLEN

Desilu Productions has returned to standard motion picture practice for photographing and editing the weekly *I Love Lucy* film for television, which is filmed by Karl Freund, A.S.C. Previously, the company employed a cueing system and a multiple camera setup.

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Prockter Syndications International is newly organized company which will syndicate film programs for television. Major portion of company's activities will be devoted to domestic and foreign distribution of film programs created by independent producers for television stations and local advertisers.

Andrew Jaeger, company V-president stated that the future of film packages is being challenged by the problems of local TV stations. Their big needs are film packages of acceptable quality at realistic prices. Most of them can only by film properties, he says, if their sales departments actually have a sponsor ready to pay the freight of the package because of the high price structure.

The development of film packages which can be sold at a price which will enable the stations to buy them for sustaining as well as commercial use is essential, Jaeger pointed out.

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Stock shot footage—over 2,000,000 feet of it—is now available to producers of TV films. Ben Pivar & Associates, at Hal Roach Studios, recently acquired controlling interest in the Independent Film Library, and will make stock shot footage available to telefilm industry.

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Official Films, originally reported in a TV film production tieup with Jerry Fairbanks, reportedly has completed negotiations with Hal Roach, Jr. which will result in creation of the largest TV film production company in the country. Four shows are planned for immediate production.

•

The Film Industry has become an integral part of Television, according to Frank Orme. Writing in the September issue of *TV*, Orme says that more than 100 television film producers are active in Hollywood at this time. "Next year," he says, "TV film production will be a $100,000,000 baby." Millions of dollars have been made available for telefilm production, with investors basing their confidence on the independent station market, he says. "Completely without cooperation from the major film companies a TV film industry has sprung up in Hollywood which is already producing a greater volume of film than in the entire theatrical film industry . . . Eventually every major film company will be in the television business."

•

The Association of Documentary and Television Film Cameramen has announced new wage scales now in effect, as follows: cameramen, $62.50 per day, $225 per week; soundmen, $35.00 per day, $150 per week; assistant soundmen, $28.00 daily, $120 per week.

•

At least eight factors causing degradation of picture quality in kine-recording for television have been identified by Radio Corporation of America technicians. Factors, which cause loss of detail, distortion of the gray scale rendition, and increase of noise or graininess in TV film are listed as faulty scene lighting, poor handling of the studio camera, improper adjustment and maintenance of levels in the circuitry associated with the recording monitor, optical and mechanical losses introduced into the system by equipment components, and the film size and processing methods.

RCA believes little improvement in photographic processes can be expected under present conditions, but that an increase in kinescope brightness or the introduction of a new film emulsion might make changes in processing desirable.

•

Filmed commercials for the Red Skelton show are now being turned out by Desilu Productions, with Karl Freund, A.S.C. at the camera. The commercials are virtually complete productions in themselves, running several minutes on the screen, and have the same high directorial and photographic quality that characterizes the *I Love Lucy* series of TV films, which Desilu also produces for Phillip Morris cigarettes.

TV Film Quality

Most film that is good for television use has employed a restricted scene brightness range. This does not mean "flat" studio lighting. All accent lighting used so effectively by Hollywood can and should be retained. But the ratio of that light to fill light must be reduced. Again it becomes a problem of fitting the scene into the final print densities which can be faithfully reproduced.

—Journal of S.M.P.T.E.

The Making Of A Prize-Winning Film

John Cowart, whose 'King Bookie' was a Top Ten winner last year, credits American Cinematographer articles for helping him along the road to success.

By JOHN FORBES

Photos courtesy Atlanta Journal-Constitution Magazine

JOHN F. COWART, Atlanta amateur and winner of one of Top Ten trophy awards in last year's American Cinematographer Amateur Movie competition, used a Bolex H-16 in filming "King Bookie," 600-foot 16mm black-and-white thriller.

COWART's flair for dramatic lighting is shown in this shot of two of the bank robbers in "King Bookie"—one trying to force a confession from the other who has double-crossed the gang and re-stolen the money.

SKILLFUL lighting again is demonstrated in this shot of the robbers at work rifling the bank vault. An Atlanta bank manager kindly consented to the use of bank's interior by Cowart and his company for filming the realistic robbery and get-away scenes.

TRAINING HIS SIGHTS on his third American Cinematographer Award in a row is John Cowart of Atlanta, Georgia. If he accomplishes his aim, he will probably be the only amateur cinematographer on record who will have won three national awards with his first three amateur movies.

Cowart's first attempt at making movies was a pretentious drama running 600 feet in 16mm black-and-white titled *Midnight Rendezvous.* He entered it in American Cinematographer's 1950 Amateur Motion Picture Competition and won an Honorable Mention certificate. When he commenced production of *Midnight Rendezvous* he didn't even own a cine camera. He rented one from a local camera store and prevailed upon his friends to act out the mystery drama which he had written himself.

Encouraged by the recognition his initial effort received, Cowart decided to make another picture for AC's 1951 competition. When the votes were tabulated by the panel of judges in American Cinematographer's competition last year, Cowart's film, *King Bookie,* was among the Top Ten receiving gold trophy awards.

King Bookie is a "John F. Cowart Production" all the way. It was authored by John Cowart, directed by John Cowart, photographed by John Cowart and edited by him.

When he set out to make *King Bookie,* Cowart resolved to enlist those of his friends capable of rendering the most professional acting performances. His first production had taught him that good acting is nine-tenths of the success of a dramatic amateur production.

Truman Haygood, Delta Air Lines statistician, assumed the role of King Bookie, an underworld boss. His ace gunman was Joe Wray, a teenager whose performance is equal to the best of any of the Dead End Kids'. Olive Bell Davis, feature writer on a local newspaper, played the gun moll, and Bob Smith played an accomplice of Miss Davis in crossing up the bank robbers by stealing the money from them.

Despite the fact it's a gangster story, it's a very clean movie. The gangsters smoke a lot of cigarettes, look real

(Continued on Page 514)

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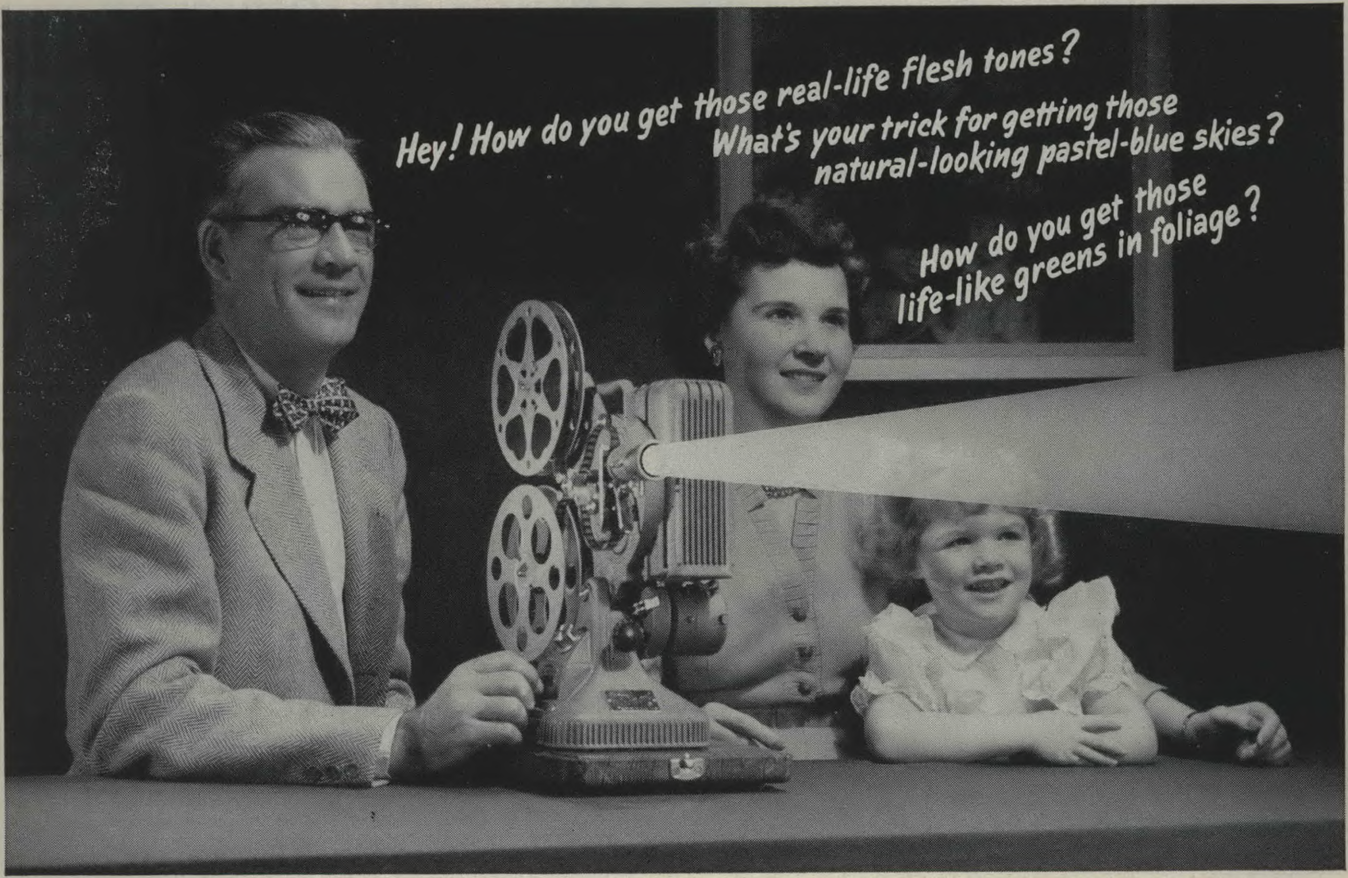
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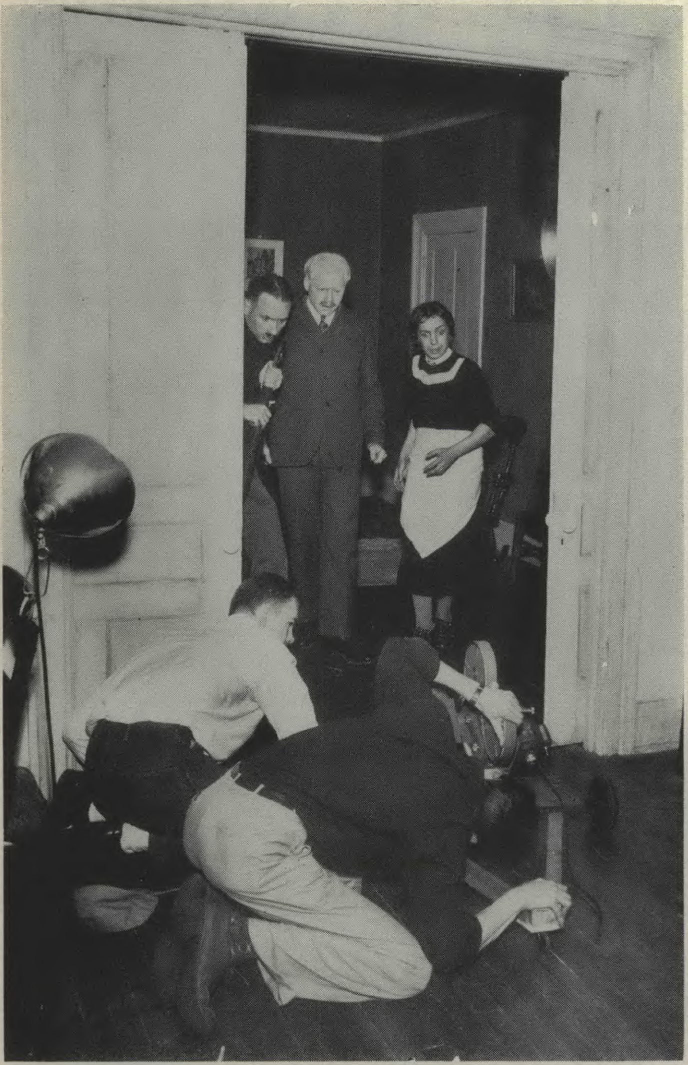
'Metamorphosis' — Cine Thriller In 16mm Sound

Imaginative treatment and skillful photography enhance 16mm sound film production of Michigan college group.

By WILLIAM WEIGAND

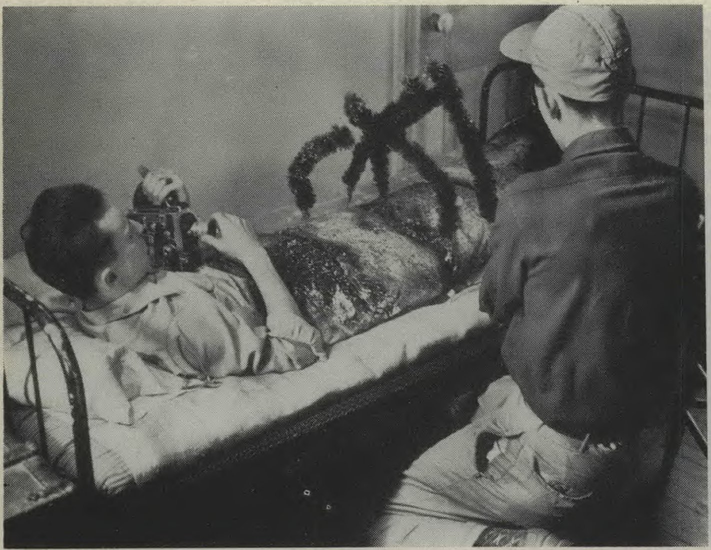


"METAMORPHOSIS" concerns a man turned into a cockroach and the horror experienced by himself and his family. To achieve a "bug's-eye" view of most of the action, the camera was mounted on a homemade three-wheel dolly.

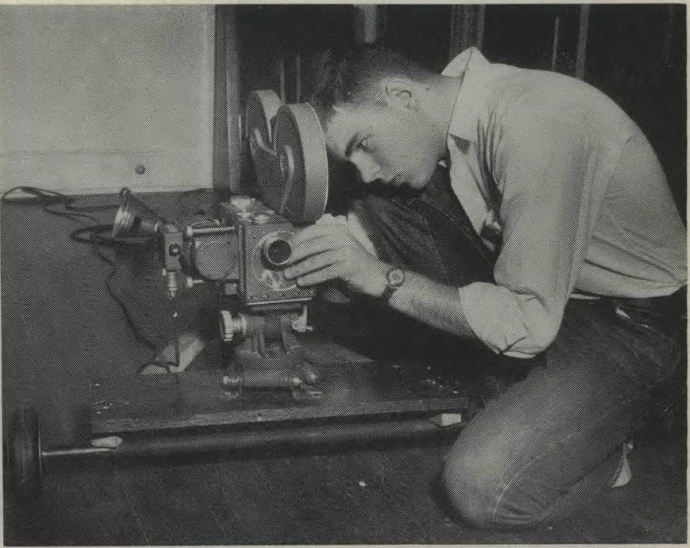
FOR A REALLY heartening answer to those mourning the apathy and inactivity among cine amateurs in this country, one might take a look at the activity in Ann Arbor, Michigan. A group there, known as the Gothic Film Society, with limited experience in the field of serious cinematography and even less plentiful financial resources, have undertaken and recently completed a full-length 16mm sound production of Franz Kafka's famous short story, *Metamorphosis.*

The finished production is not only interesting from the standpoint of what can be done on a shoestring budget, but also because the nature of the film called for a number of rather novel approaches to the photography.

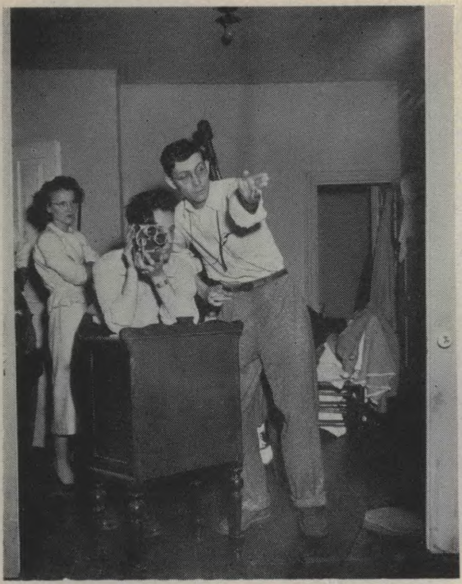
The guiding spirit behind Gothic, William J. Hampton, is



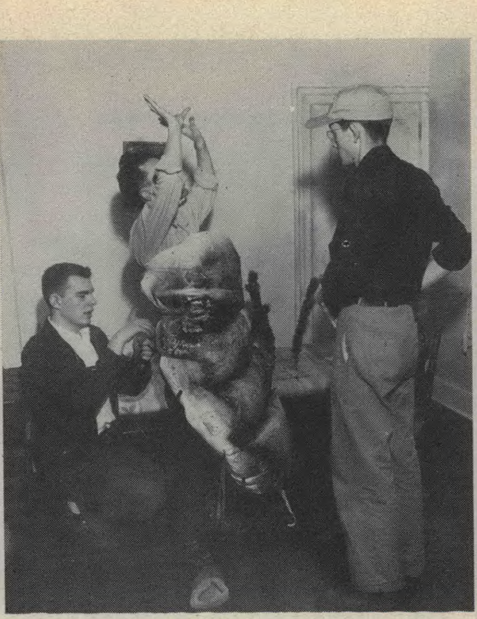
CAMERAMAN Paul Meagher partially costumed as a giant cockroach, prepares to shoot a closeup of his body as seen by the insect. Directing the proceeding is William Hampton.



CAMERA OPERATOR Charles Elliott prepares the dolly-mounted 16mm Maurer sound camera for a low angle shot. Actual sound was recorded on magnetic tape.



CAMERAMAN Meagher is seen here using finder of his Bolex to line up a shot under guidance of director Hampton.



ELLIOTT straps bug costume on Meagher as Hampton discusses movement of camera in shot about to be filmed.

TYPICAL of the fine lighting in most of the picture is this scene of horrified maid and the mother of victim.

a teaching fellow at the University of Michigan who had already experimented with several brief features. Hampton went all out rounding up the talent needed for *Metamorphosis*. Paul Meagher, his family dentist, and a Michigan alumnus, was the first and most enthusiastic recruit. A long-time camera bug, Meagher did almost all of the photography for the film. Entirely apart from any University of Michigan auspices, the society enlisted a group of semi-professional actors for the cast, secured a shooting script from a couple talented student writers, and got a complete original music score from a young composer at the university.

The story they wanted to tell was that of a young man who awakens one morning to find himself transformed into a gigantic cockroach. Losing none of his emotions or human intelligence, the man's reactions to his family and their strange relation to him are part of the strong psychological impact of the story. As conceived by Hampton, the film was to capture the element of horror without losing the matter-of-fact, almost documentary, style of Kafka. In other words, although the story is in itself fantastic, the mood of the photography must be straightforward and at the same time, somehow distorted.

The distortion to achieve this mood was needed particularly since the cockroach himself, with the exception of one brief moment, was not to appear on the screen. The limited budget made an artificial cockroach that was mobile and realistic practically impossible. Hampton therefore decided to employe a camera-eye technique in the manner of Robert Montgomery's *Lady in the Lake*. In this case, however, the eye of "the hero" is for the most part only about eighteen inches above the floor. The camera, hence, must move in this plane for most of the shots. In this manner, the wide angle of the perspective naturally creates a certain distortion without affecting the material reality of the objects photographed —a reality important to the documentary quality.

Also, by this technique, an audience identification with the human qualities of the insect are preserved. During the course of the picture, for example, the insect is injured several times, and his eyesight is affected. The camera was thereupon intentionally thrown out of focus for these sequences, forcefully recalling the human agent behind the lens.

For the dialogue sequences, the Society was able to rent from the University a Maurer 16mm camera with synchronous motor drive. Recording of sound was done with a Reeves sprocketed-tape recorder. A rubber-tired dolly was specially constructed on which the Maurer was mounted with the lens the required distance above the floor. Cameraman Meagher lay on the dolly and did most of the actual photography in that position. Assistants moved the dolly from behind when the script called for the "cockroach" to move along the floor.

The construction of the dolly called for several revisions. At first, uneven wheels were attached to the axles to obtain an irregular rocking effect. The early rushes, however, proved that these shots were extreme and, despite their jarring realism, were more likely to make an audience seasick than entertain them. The dolly was rebuilt and provided with a single wheel in back rather than two, and the movement secured with the three-wheeler proved just shaky enough to suggest a sidewise motion without wreaking havoc on the stomachs of the audience.

It very soon became clear, however, that a solid diet of shots from the low, floor angle would grow increasingly monotonous for seventy-five minutes. Besides that, the script called for the cockroach to perform at other levels. In one place, for example, he is called upon to roll himself out of bed. Later, he must climb upon a chair to turn a doorkey in its lock. Finally, he crawls about on the walls and ceiling.

Undeniably, these could be exciting effects. However, no eighty-pound professional camera could be managed in such gymnastics with the equipment available, so Meagher decided to film these shots with a hand-held Bolex. The drawback, of course, was the capacity of the camera, since no more than a hundred feet of film could be shot at a time.

With care, however, Meagher managed to finish each of his twenty-second runs either on a fast pan or on an anonymous section of the ceiling or door. This permitted him to reload and continue without perceptible effect in the projected print.

A transfer of cameras in mid-scene was involved in one sequence. Meagher was here called upon to move the "cockroach" from the floor to the seat of a chair, then reach toward a key to unlock a door. When the Maurer was focused on the dark chair seat, he quickly shifted to his Bolex and moved it easily to the lock. Here he abandoned the viewfinder and adjusting the focus by hand, rotated the camera in a nearly

(Continued on Page 508)

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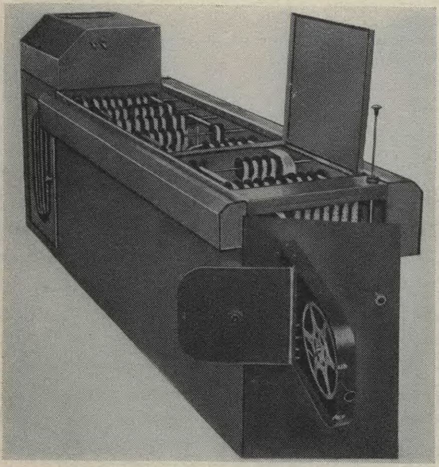

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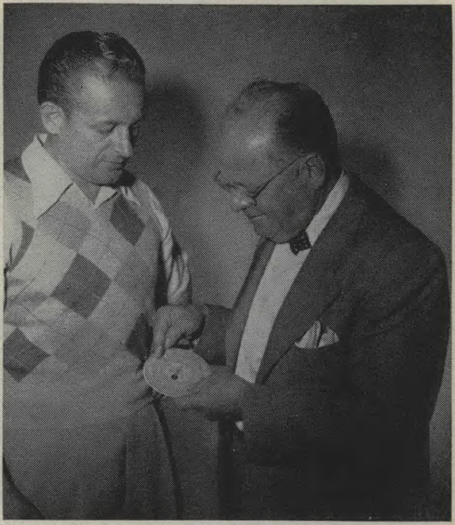
By JOSEPH RUTTENBERG, A.S.C.



EXAMINING the new Kelly Cine Calculator, developed in England as an aid to cameramen, are Joseph Ruttenberg, A.S.C., and his assistant, Ted Voigtlander.

For a long time, cameramen have yearned for a form of calculator, or slide rule, that would supply answers quickly to the several purely mathematical problems which confront him daily both in and out of the studio.

Such a need finally has been supplied in the Kelly Cine Calculator. Designed by W. B. Pollard and Skeets Kelly, British cameramen, the calculator is both accurate and capable of supplying answers to a great number of problems of the cinematographer.

The large amount of information carried on the calculator, its portability, and its clear scales in red and black, make it easily readable at a glance.

The calculator is virtually a slide-rule in disc form. Two rotatable plastic discs, about 4½" in diameter, are mounted together by means of an eyelet in the middle. Printed on one side are scales giving the hyperfocal distance and depth of focus for seven lenses: 25, 28, 35, 40, 50, 75 and 100 mm focal length. The range covered is from f/2 down to f/11 and from infinity down to 2 feet. These distances and apertures can be found quickly and easily by a twist of the outer disc. On the reverse side is another set of seven calibrations, as follows:

(1) Film used per second, 16mm and 35mm in both metres and feet.
(2) An aperture scale from f/1 to f/32 in thirds of a stop, plus equivalent Technicolor stops from T1 doubling to T64.
(3) A filter factor scale ranging from 1.5 to 16. This scale also carries, by name, ten of the more commonly used filters.
(4) Shutter angles from 5° to 280°.
(5) Camera speeds expressed in times normal from 1/24 times to 16 times and also in frames per second from 1 to 384.
(6) Incident Key light in thirty-one steps from 12 to 12,800 foot candles.
(7) Field of View calibrations for 14 lenses of focal lengths ranging from 24mm to 200mm at all distances from 1 foot to 500 feet.

Normally, all the information carried on the Kelly calculator would require something like forty pages of printed matter if set up in booklet form. In the compact slide-rule form, which easily fits pocket or billfold, this new accessory it bound to find wide acceptance by cameramen everywhere.

Its accuracy is assured by the fact its designer also holds a B.A. degree in applied mathematics. Several cameramen nevertheless, have undertaken to prove its accuracy themselves. Invariably the Kelly calculator gave slightly different answers than those appearing in some reference books, but, on working through these particular calculations, it was found that the calculator was in every case correct.

I have already put the calculator to use many times and the benefits derived are sufficient to warrant passing the news of this new accessory around to others.

There is a 16mm version of the calculator for 16mm cameramen, too, and it seems to me it will do for him all that is claimed for it.

At present, the Kelly calculator is available only in England. It's priced at 2s, plus postage, which is roughly $3.60. It is being distributed by the British Society of Cinematographers, 59 Sloane St., London, S.W. 1, England.

"METAMORPHOSIS"

(Continued from Page 507)

complete turn to represent the cockroach's mouth turning the key in the lock. The ceiling and wall shots were taken from different heights on a ladder, or along a plank laid between two ladders.

The trickiest shot of all also remained for execution with the Bolex. Hampton, from the beginning, hoped to incorporate some visual evidence of the cockroach into the picture. That is, if the cockroach could once look down at his own body, the visual picture of it was bound to be worth a thousand words.

To achieve this a long latex bag was made and constrictions sewed into it.

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It was inflated and enameled on top to give the appearance of an insect's segmented belly. The "legs" were fashioned from wire brushes tapered to a point and fastened to the body, so that they would quiver lightly at a touch.

Meagher, who is not very large himself, strapped the contrivance over his legs, lay down on a bed, and panned across the ceiling with the Bolex to represent the first moments of the insect's awakening. As the camera then comes downward, the "eyes" record the instant horror of what has happened to the body. The shot, of course, lasts only a few seconds, but the high gloss on the body and the odd quivering of the legs prove doubly effective for the brevity of it.

Since all the scenes were interiors (the Society used two large rooms in an old Ann Arbor house), Hampton also decided to shoot two framing sequences in order to give the picture still more variety. That is, he would include an opening and closing scene (the former before the titles) which would be apart from the "insect's eye" technique employed the rest of the way. These would take full advantage of the usual privileges of the omniscient camera including close-ups.

The working hours of the Society added to the production problems. Be-

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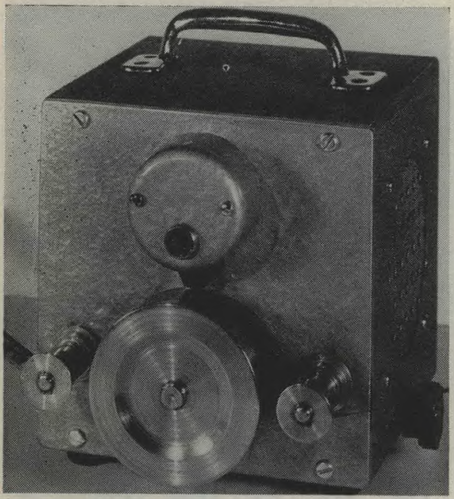

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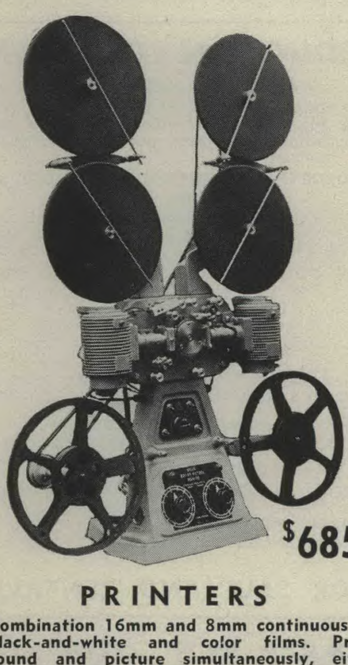

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cause the house was on a busy street, sound shooting was confined to the quieter hours — late at night, or very early morning. Most of the windows had to be draped constantly to keep out the glare of a supermarket across the street, and use of arc lighting units was not pemitted by the local power company because of the house's antiquated wiring system. The subdued shadows, the contrasting blacks and whites, however, added greatly to the mood of the picture. Natural morning light served well for some of the bedroom scenes.

Sound recording also was a problem. Although the rooms were soundproofed as much as possible by hanging sheets and blankets on the walls, the movement of the dolly often became audible on the sound track, and these scenes had to be reshot. We found that certain sequences, which were scheduled to be shot with sound, could be done silent merely by keeping the heads of the actors above the top of the frame. That is, the camera, as the cockroach's eye, could be placed far enough beneath the bed to make the angle of shooting reach only to the actor's shoulders. The dialogue could then be recorded later with no need for lip synchronization. For those scenes that required lip-synch, the home-made blimp first used was found defective and a regular professionally-made blimp had to be rented.

Editing the film became the last crucial step in the campaign for real variety in the cinematography of *Metamorphosis*. Monotony in the story of a cockroach's existence could not be paralleled by monotony in the photography of a film version of this life. Consequently, where successive scenes seemed too similar either in angle or lighting, they were spaced further apart in the final print (where the plot permitted). Occasionally, they were drastically cut in order to begin or end with some calculated effect. In one case, one hundred feet of film, mistakenly double-exposed proved almost unbelievably valuable for a kind of "summing up" or "memory" sequence near the end of the picture. Further footage was shot around this bit in order to point it up. Most of these changes from the original story line, it developed, increased the significance and added to the impact of the Kafka tale.

Metamorphosis will receive its world premiere in Ann Arbor sometime before the first of the year. Although William Hampton's experience with sound movie making has been confined to a single previous effort — a thirty-minute satire, which received friendly notices from Detroit critics—he, along with his associates in the Gothic Film Society, hopes this later feature-length production will serve as a stepping stone to bigger and better 16mm sound productions. If nothing else, it proves that a group of amateurs working collectively, and following professional procedure, can turn out worthwhile amateur films.

SCIENCE FILMS FOR SERMONS

(Continued from Page 496)

graph the creatures, plants, etc., that are the subjects of films in the *Sermons From Science* series.

The Moody film project had its beginning seven years ago when Dr. Moon, then a Los Angeles pastor and amateur movie maker, started making 16mm movies of natural wonders which he could use to illustrate his sermons. His home became a small film studio, and here he conducted some of his very first scientific filming experiments, such as photographing the growth of plants by interval microscopic photography. Then he made a detailed motion picture study of the life cycle of the Swallotail butterfly, using the same methods and equipment. These and other subjects made up his first half-hour Institute film, *God Of Creation*.

In the early days of the institute, necessity frequently became the mother of invention for Dr. Moon and his associates. Obliged to operate on a low budget, the film makers were constantly seeking ways of making a little of the budget cash go a long way.

Whereas most instructional films begin with the preparation of a shooting script, Dr. Moon and his associates have found that, for their type of films, prepared shooting scripts are impractical. This is because when they start on a new *Sermon From Science* film, they never quite know what sequences can be secured and included in the narrative.

As individual scenes grow into sequences, these in turn are represented by a series of color sketches which are arranged in logical order on a story-board at the studio, a practice established in the production of animated cartoons. The story-board provides an excellent outline for story conferences and enables the production staff to visualize the development of the story line.

Whenever the camera crew is out on a filming expedition, the project has a two-fold aim: to secure the shots planned for and also to photograph any subject matter which might be used in a future production. Sometimes, when shooting "on location," Dr. Moon or one of his cameramen will stumble on to some unusual creature or plant having a basic idea for another science film subject. The initial shots, when studied on the screen, serve in developing a complete new subject. In one instance, when the company was on the desert shooting scenes for the life-cycle of the Gila monster, an opportunity to shoot a number of studies of rattlesnakes presented itself. This footage has since been catalogued and stored for future use. Members of Dr. Moon's staff have been trained to observe the world about them when out on location, and to recognize and film objects having potential value for the type of films which the Institute is dedicated to produce. The valuable stock shot library which has been built up as a result of this practice contains thousands of feet of natural history and science subjects in 16mm color.

The *Sermons From Science* series has been filmed under conditions that often would have discouraged many professional film producers. Most of the features have been made on a budget of $30,000 or less and with a staff of a dozen workers, all of whom share Dr. Moon's enthusiasm for the work. Where professional equipment has been lacking, the company improvised or adapted existing equipment to their needs. Once, when an animation crane was required, the fifteen to twenty thousand dollars needed for a standard professional model was not available; so the Institute's staff built one, using two machine lathes and other miscellaneous parts.

Much of the Institute's electrical equipment, including the power generators, are adaptations of war surplus equipment. It is estimated that cameras and other film production equipment now owned by the Institute has a value well over $100,000.00.

A great many of the Institute's most interesting subjects have been made by time-lapse photography, much of it highly magnified. For this, automatic timing devices are employed which are so synchronized that when single-interval exposures are to be made, the object is lighted momentarily by stroboscopic light. This method, instead of the conventional photolamp illumination, has been found more successful in the photography of insects and other living creatures. The short-interval illumination creates no disturbing heat and thus does not cause abnormal reaction in otherwise natural action of the insect subjects. It has been possible to successfully photograph some subjects with this light at 64 frames per second, using an exposure of F/22.

Among the interesting time-lapse studies observed in course of filming at the Institute studio was that of the life

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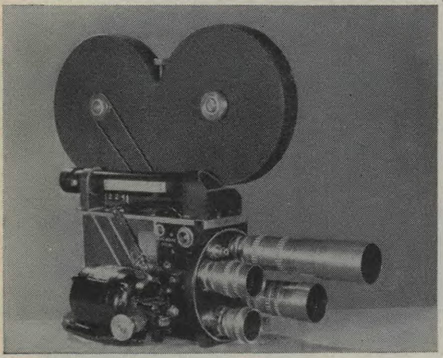

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of the trap door spider. The spider and his subterranean home had been moved intact from a distant field and into the studio. Here camera and lights were trained upon it to record action that showed in extreme closeup how the spider emerges from and re-enters his quarters. For those who are not familiar with a trap door spider's nest, it consists of a hole in the earth about an inch in diameter. Over this is a cleverly designed earthen lid which the spider fashions from mud. The lid is hinged to the nest opening by a web of fine silken threads. To emerge, the spider merely applies pressure to the door and exits. On re-entering, he lifts the door with his feet, and it closes behind him. So cleverly is the earthen lid designed that, when closed, it is difficult to distinguish from the surrounding ground.

In order to capture the spider emerging from the door of the nest photographed on the stage, the trap door was wired to trip an electric switch that turned on the photolamps at either side of the camera, at the same time setting the camera in motion, also. The camera continued exposing film until the spider re-entered his trap. When the door was closed, contact with the lights and camera switches were automatically cut, turning off both.

The Institute does all its own sound recording. Adjacent to the main photographing studio is the recording room. Here is a battery of four Stancil-Hoffman magnetic recorders. As most of the recording consists of narration—usually by Dr. Moon himself—the recording arrangement is similar to that found in most sound recording studios. Facing the control room, Dr. Moon observes the film being projected onto a small translucent screen. Thus, without turning away from the screen, he can follow directions of his sound engineer.

As a result of the wide acclaim given the *Sermons From Science* films, the Moody Institute plans to increase its staff in order to step up production from one feature film per year to four. This means considerable expansion of its present studios—perhaps newer and larger quarters. Still another project which forces the Institute to plan enlarging its studios is the demand for film strips to augment its films. Already these are being produced by an interesting method whereby 16mm frames of the original film are blown up to 35mm — the accepted standard for film strips. END.

DOUBLE EXPOSURE

(Continued from Page 498)

methods of photography.

"I am of the 'blue light' school, that is, all light on the set is balanced to the color temperature of daylight and all incandescent units are used in conjunction with the MacBeth filter. That's unorthodox. Most cameramen, including Rudy, use yellow incandescent lighting for interiors and blue for daylight. However, I believe that my theory gives more brilliance to the setting because it filters out the red, and I have found that method best for me.

Says Mate: "I was very pleased when I learned that Buddy was to be my director of photography. It always has been my belief that the selection of first cameraman should be just as important to a director as story and cast. He can either make or ruin a picture. In the motion picture, it's a means of self-expression equal to the other arts. Now, as a director, I find that my experience as a cameraman is of inestimable help.

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CHARLES E. PERCY, president of Bell and Howell Company, takes movie of Donna Reed, star of MGM's "Saturday Hero" with one of the first professional movie cameras built for Hollywood in 1907 by Bell and Howell. The occasion was the presentation of the Society of Motion Picture Art Directors award to Bell and Howell for outstanding design in their new "200" 16mm magazine load amateur movie camera.

It aids me in making schedules, estimating costs, even in selecting a cast."

To all that, Lawton is in full accord. Instead of any temperamental clashes with his director he found that his entire work was simplified.

"Some directors just don't know what a cameraman is up against," he says. "That, of course, is understandable. They've never done it themselves. The toughest directors to work with on that score are those fresh from the legitimate stage. Everything is different for them. I remember once when such a director told me, 'I want this scene to be very dark. Have the characters barely visible.' That's the way I lighted it. Then he told me, 'No! . . . No! That's far too much light.' I tried to explain to him that if I cut down any more, nothing would appear on the film. But he insisted. When he saw it in the dailies, he apologized and from then on believed my technical skill was better than his. But the scene had to be re-shot which cost time and money. Still, directors aren't the only ones who have been guilty of this, either."

One reason why Mate and Lawton proved to be such a cooperative team during the filming of *Paula* was the fact that they had many conferences before a camera was turned.

"Cameramen are all perfectionists," says Rudy. "Before I stepped on the stage, Buddy and I plotted all our scenes. That made for fewer delays and less snap decisions to make on the set. Right from the start, we were in perfect accord about how the camera and lighting should express the mood of this human and emotional drama.

"The lighting for *Paula* presented a problem. A great part of it was filmed in interiors which instead of high walls and no ceilings, had ceilings and walls just like any ordinary room. Contrasting with this, there was our location in the General Petroleum Building which had very high walls and ceilings. Lighting in both entrances had to be done from the stage floor without the aid of lights on a catwalk above."

Although Lawton recognizes that these were serious hurdles to overcome, he says that this film has been the most enjoyable picture he ever has photographed and gives credit to Mate.

"Rudy never once interfered with my work," he says, "like so many other directors are wont to do. The whole camera crew agrees that he's wonderful to work for. Take Frank Carson, my operator. It's easy to make a fluff on a complicated dolly shot. Just like an actor goes up on a line. So, of course, Frank eventually made one. When an operator does that, I've heard many other directors get very sore. Not Rudy. He knows how easy it is to make such

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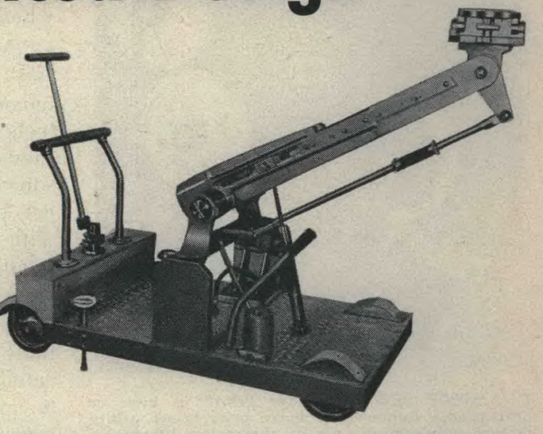

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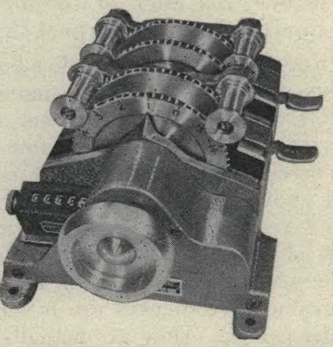

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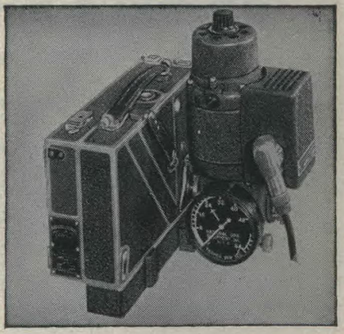

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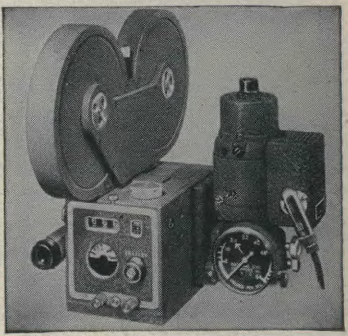

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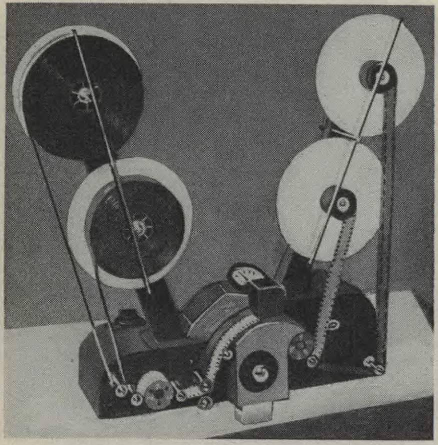

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a mistake. He's done it himself. He just smiled at Frank and we made another take just as though it had been the star's fluff."

Another reason why Lawton found it so congenial to work with this ex-cameraman is the fact that the director knew immediately what Buddy meant when he had a suggestion.

"Many directors," says Lawton, "just can't seem to get what a cameraman means. And you don't have to be too technical in your talk, either. Again if they think you are taking too much time with your camera set-ups, they'll get very impatient. I had none of that with Rudy."

Often, too, Lawton continues, he has worked with directors who plot the action of their scenes without consulting their cameramen first. They get complicated shots which require the operator to maneuver into all kinds of contortions and be more of a pretzel than a man. They overwork the idea of pictorial effects that the cameraman knows are wrong. But after all, the director is the director and has the final say.

"Rudy never uses complicated movements just for the sake of a movement," says Lawton. "He knows that a great part of the time this will come out on the screen as a jumble, that is unless said movement has a purpose and a sound reason behind it. If he makes a dolly shot following an actor, the dolly stops when the actor does. This means naturalness. Audiences are never aware of the camera. They are actually seeing life, not a picture of life obviously photographed.

"Many directors, too," says Lawton, "don't seem to know or even suspect that some stars photograph better showing the left side of their face. Rudy recognizes that just by looking at them. He therefore prepares the action of his scene with that in mind. He doesn't have to wait for his cameraman to come to him on the set and tell him which side of the face a star should expose to the lens, and then have to reconstruct all his action."

Mate, he adds, has the keenest sense of texture, composition, lighting and color values of any director with whom he ever has worked.

As a matter of fact, the threat all during the filming of *Paula* was not that temperaments would clash but that these two would develop into a mutual admiration society. To which eventually, every member of the cast and crew joined in a hearty and honest, "More power to them."

PRIZE-WINNING FILM

(Continued from Page 504)

tough, but they don't guzzle whiskey, and the gun moll and her boy friend don't kiss each other once. Cowart said it didn't even occur to him to plan a love scene for the picture. "When a movie is only 20 minutes long," he explained, "you have to leave out insignificant details." Some Hollywood producers should listen to him.

The story has to do with a gang of young punks who rob a bank in broad daylight, pass the loot to a girl accomplice as they hurriedly exit from the bank, intending to rendezvous at an old shack on the edge of town and split the money between them. But the girl and her accomplice double cross the robbers. King Bookie and his pals set out in search of the pair, locate the

girl, then her boy friend. The couple is taken to the shack and given the third degree. Eventually the money is recovered and the tough guys erase each other in a brief battle of gun fire at the shack. The girl lives to tell the story to a detective—the scene that opens the picture.

Miss Bell still wonders what would have happened if an unenlightened Atlanta policeman had driven by the North Avenue branch of the First National Bank when they were staging and shooting the robbery scenes. "The steal was done by King Bookie and two accomplices," she said. "According to the plan, I strolled casually down the street, timing my walk so I'd pass the bank entrance just in time to meet the 'boys' who handed me the bag of cash. This I passed to my boy friend waiting at the curb in the getaway car. I then walked calmly on, but back at the bank a guard came out and opened fire on King Bookie and his accomplice, felling the latter. Oddly enough, only one pedestrian paid any attention to these goings-on, and his suspicions and alarm were allayed when he spied our 'crew' and camera across the street as John called 'Cut!' "

Cowart and his company, of course, were quite free of any possible inadvertent action on the part of alarmed bank employees or of the public passing on the street. Earlier he had made arrangements with bank manager J. W. DuBose to use the bank's interior for the necessary robbery scenes, and it was DuBose who also consented to play the part of the detective in the picture.

Although the police failed to interrupt the shooting of the bank robbery scenes, real cops seemed to pop up every other time the company went out to film scenes for the picture. When staging the scenes in the old shack on Peachtree Place—a spooky, dilapidated former mansion with banging shutters and a hollow sound—police put in an appearance when Miss Bell realistically responded with a scream while King Bookie twisted her arm in attempting to wring a confession from her. Two officers broke into the house and demanded to know what was going on. Fortunately, Cowart earlier had obtained permission in writing from the owner of the house, and the officers stayed around awhile to watch the filming. The house, incidentally was scheduled to be torn down the next day to make way for a new office building, so Cowart and his company worked that night from 7 till 1 o'clock to shoot all the scenes scheduled for that location.

Cowart never prepared a written script for the picture. In the beginning he told his cast and crew about the story line, and the details were worked out as they went along. The actors spoke lines in order to give their action realism, but no sound track was recorded. Later a 17-year-old high school student, Don Shields, wrote a narrative script to explain the action, and a local radio announcer recorded the commentary on tape. This was backdropped by an instrumental recording of "Slaughter On Tenth Avenue."

The judges, all of whom have photographed many thousands of miles of motion picture film themselves, commended Cowart for his skillful use of local settings and he sincere acting of his amateur cast.

"A chance discovery of American Cinematographer magazine in an Atlanta camera store started me in the hobby of making amateur movies," said Cowart. "The magazine has since helped me considerably with my film making. There is, of course, still much to learn; but with American Cinematographer coming to my home every month, most of my technical problems will be solved."

John's mother, Mrs. Robert L. Cowart, says you should never underestimate the influence of a box-top and a dime may have on your child's life. John got his first camera that way at the age of 7, and he's been working

(Continued on Page 522)

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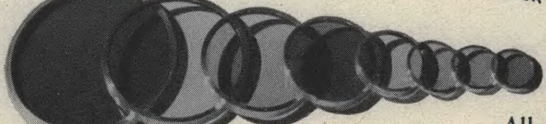

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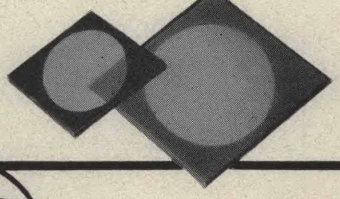

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Major film productions on which members of the American Society of Cinematographers were engaged as directors of photography during the past month.

★ ★ ★ ★ ★ ★ ★ ★

Columbia

- Joseph Walker, "The Marrying Kind," with Judy Holliday. George Cukor, director.
- Fayte Browne, "Laramie Mountains," with Charles Starrett and Smiley Burnette. Ray Nazarro, director.
- William Bradford, "Apache Country," (Gene Autry Prod.) with Gene Autry. George Archinbaud, director.
- Charles Lawton, Jr., "The Saber and the Arrow," with Broderick Crawford and Barbara Hale. Andre de Toth, director.
- Fayte Browne, "Rough, Tough West," with Charles Starrett, Smiley Burnette. Ray Nazarro, director.

Independent

- Ernest Laszlo, "The Lady In The Iron Mask," (Color) with Louis Hayward, Pat Medina. Ralph Murphy, director.
- Ernest Haller, "Monsoon," (Film Group, Inc., Prod.) (Color) with Ursula Theiss, Diana Douglas, George Nader. Rodney Amateau, director.
- Joseph Biroc, "Red Planet," with Andrea King and Peter Graves. Harry Horner, director.
- Ellis W. Carter, "Outlaw Women," with Marie Windsor and Richard Rober. Sam Newfield, director.

M-G-M

- Charles Rosher, "Scaramouche," with Stewart Granger, Eleanor Parker. George Sidney, director.
- William Mellor, "Skirts Ahoy," with Esther Williams, Joan Evans. Sidney Lanfield, director.
- Robert Surtees, "The Merry Widow," (Technicolor) with Lana Turner. Curtis Bernhardt, director.
- George Folsey, "Lovely To Look At," with Kathryn Grayson, Red Skelton. Mervyn LeRoy, director.
- Paul Vogel, "The Girl In White," with June Allyson, Arthur Kennedy, Mildred Dunnock, Gary Merrill. John Sturges, director.
- William Daniels, "Glory Alley," with Leslie Caron, Ralph Meeker, Gilbert Roland. Richard Walsh, director.

Monogram

- William Sickner, "Starlight Canyon," with Wayne Morris and Anthony Caruso. George Blair, director.
- Ernest Miller, "Waco," with Wild Bill Elliott, Pamela Blake, Lyle Talbot. Lewis Collins, director.
- Ernest Miller, "Man From Black Hills," with Johnny Mack Brown, Florence Lake. Thomas Carr, director.

Paramount

- Lionel W. Lindon, "This Is Dynamite," with William Holden, Alexis Smith and Edmond O'Brien. William Dieterle, director.
- Charles Lang, "Los Alamos," with Gene Barry, Lydia Clark, Nancy Gates. Jerry Hopper, director.
- George Barnes, "Famous," (Color) with Bing Crosby, Jane Wyman, Ethel Barrymore. Elliot Nugent, director.

AMERICAN SOCIETY OF CINEMATOGRAPHERS

FOUNDED January 8, 1919, The American Society of Cinematographers is composed of the leading directors of photography in the Hollywood motion picture studios. Its membership also includes non-resident cinematographers and cinematographers in foreign lands. Membership is by invitation only.

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R.K.O.

- Russell Harlan, "The Big Sky," with Kirk Douglas. Howard Hawks, director.
- William Snyder, "The Korean Story," with Robert Mitchum. Tay Garnett, director.
- Harry Stradling, "Androcles And The Lion," with Jean Simmons, Victor Mature. Chester Erskine, director.
- Karl Struss, "Tarzan The Hunted," with Lex Barker, Dorothy Hart. Cyril Endfield,
- Nick Musuraca, "Clash By Night," (Wald-Krasna) with Barbara Stanwyck, Paul Douglas and Robert Ryan. Fritz Lang, director.

20th Century Fox

- Arthur E. Arling, "The I Don't Care Girl," (Color) with Mitzi Gaynor, David Wayne, and Oscar Levant. Lloyd Bacon, director.
- Harry Jackson, "Way Of A Goucho," (Shooting in Argentina, in color) with Gene Tierney, Rory Calhoun, Richard Boone. Philip Dunne, director.
- Lucien Ballard, "Diplomatic Courier," with Tyrone Power and Patricia Neal. Henry Hathaway, director.
- Leon Shamroy, "The Girl Next Door," (Color) with June Haver, Dan Dailey, Dennis Day and Billy Gray. Richard Sale, director.
- Joseph LaShelle, "Outcasts Of Poker Flat," with Anne Baxter, Dale Robertson, Miriam Hopkins, Cameron Mitchell, Barbara Bates, Craig Hill. Joseph Newman, director.
- Edward Cronjager, "Cry Of The Swamp," (Color) with Jean Peters, Jeffery Hunter, Constance Smith, Walter Brennan. Jean Negulesco, director.
- Milton Krasner, "Deadline—U.S.A.," with Humphrey Bogart, Ethel Barrymore, Kim Hunter, Joseph de Santis, Paul Stewart, Warren Stevens, Ed Begley. Richard Brooks, director.
- Joseph MacDonald, "Gift Of The Magi," with Jeanne Crain, and Farley Granger. Henry King, director.

Universal-International

- Cliff Stine, "Oh Money, Money," (Color) with Charles Coburn, Piper Laurie, Gigi Perreau and Rock Hudson. Douglas Sirk, director.
- Irving Glassberg, "Hear No Evil," with Toni Curtis, Jan Sterling, and Mona Freeman. Joseph Pevney, director.
- George Robinson, "Ma And Pa Kettle Go To Paris," with Marjorie Main, Percy Kilbride, Ray Collins, and Lori Nelson. Charles Lamont, director.
- Maury Gertsman, "Red Ball Express," with Jeff Chandler, Alex Nicol, Charles Drake, Susan Cabot, Hugh O'Brian, John Hudson. Budd Boetticher, director.
- Russell Metty, "Scarlet Angel," (Color) with Yvonne DeCarlo, Rock Hudson, Richard Denning, Bodil Miller, Amanda Blake, Whitfield Connor. Sidney Salkow, director.
- Irving Glassberg, "Claim Jumpers," (Color) with Audie Murphy, Faith Domergue, Steven McNally, Eugene Iglesias, Gerald Mohr. Don Siegel, director.
- Charles Boyle, "Untamed," (Color) with Joseph Cotton, Shelley Winters, Scott Brady, Susan Ball, Antonio Moreno, Katherine Emery. Hugo Fregonese, director.

Warner Brothers

- Wilfrid Cline, "She's Working Her Way Through College," with Virginia Mayo, Ronald Reagan. Bruce Humberstone, director.
- Ted McCord, "This Woman Is Dangerous," with Joan Crawford. Felix Feist, director.
- Warren Lynch, "Retreat Hell!" with Frank Lovejoy, Richard Carlson. Joseph Lewis, director.
- John Seitz, "San Francisco Story," (Fidelity Prod.) with Joel McCrea, Yvonne DeCarlo, Sidney Blackmer and Onslow Stevens. Robert Parrish, director.
- Robert Burks, "Maru Maru," with Errol Flynn, Ruth Roman, Paul Picerni, Richard Webb, Raymond Burr, Dan Seymour. Gordon Douglass, director.

MOVIES ON TAPE

(Continued from Page 500)

vision, believe their development is the forerunner of filmless portable motion picture cameras of the future, even though their laboratory pilot model is too bulky and unwieldy for general studio use.

Their new "camera" is the culmination of two years of research and development. Actually, it does not "take a picture" in the sense of photography. Instead, it utilizes a television camera as its "eye" and through a complicated electronics system, transfers the electronic impulses to magnetic tape, which can be played and re-played indefinitely with no loss in image or sound quality.

In the demonstration for newsmen, the motion pictures recorded magnetically were run off from an ordinary roll of tape commonly used in magnetic sound recording, and manufactured by Minnesota Mining and Manufacturing Company.

As the tape passed a tiny magnetic receiving "lens" no larger than a half-dollar, recognizable images of men and women and airplanes appeared on the screen of a television set, to which the pickup-projecting unit was connected by wire.

Mullin and Johnson believe their development of a filmless camera foreshadows a great change in modern motion picture production technique, because the cost of tape is one-tenth that of film, and the new method eliminates all need of the costly and time-consuming processing of photographic film. The magnetic tape, on which the images and sound are recorded, requires no processing and may be played back immediately.

Some motion picture directors see tremendous advantages in the new method. For instance, just as it is now possible to immediately play back a magnetic sound recording and to erase and re-record it in the event it is not perfect, it would be possible to play back the picture for an immediate check as to quality of its visual content.

The savings in film and laboratory costs would be an important factor. As one prominent Hollywood engineer pointed out, the system would be a tremendous boon to the industry because of the re-use feature of the tape alone; and then there is the further simplicity the system affords of making fades, dissolves and numerous effects without need of optical printers and special effects equipment. Still another important factor is the elimination of a great deal of if not all sound dubbing.

Of course, the system is not yet to

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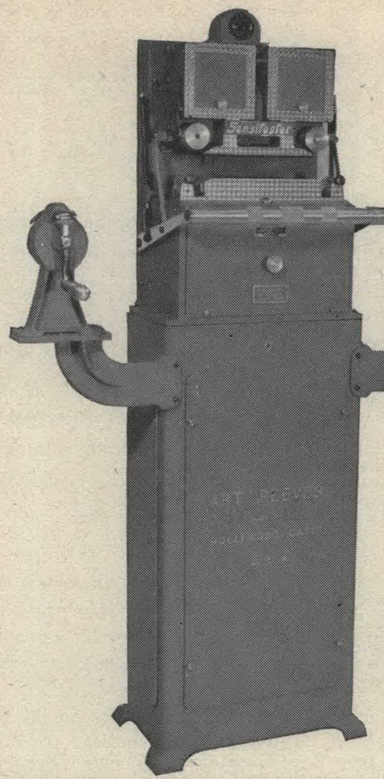

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the stage where any clear-cut method of operation within the studio has been put on paper; but it would probably work something like this: an entire production would be shot in consecutive order on a single tape, edited and corrected as the production progressed, or the various takes would be recorded, much the same as they are now, then later re-recorded on the master. From the master, "dupe prints" would be made either by straight contact magnetic duplicating methods or by re-recording, and these dupes would go to the master projecting centers to be telecast to theatres.

The cameraman would function just about as he does at present, except that he'd forget about his camera lens; there wouldn't be an optical lens on the new "camera." The picture he'd be shooting would be seen simultaneously on a closed-circuit monitoring tube, which would be an integral part of the camera, similar to the electronic viewfinders on present-day TV cameras. Set lighting would be essentially the same as it is today.

Mullin and Johnson and Bing Crosby Enterprises are not the only ones working on developing a practical system of recording motion pictures on magnetic tape; it just happened that they are the first to demonstrate it publicly in Hollywood. Loren L. Ryder at Paramount, Radio Corporation of America, Armour Research Foundation, Brush, Bell Telephone Laboratories, and Minnesota Mining and Manufacturing Co., just to

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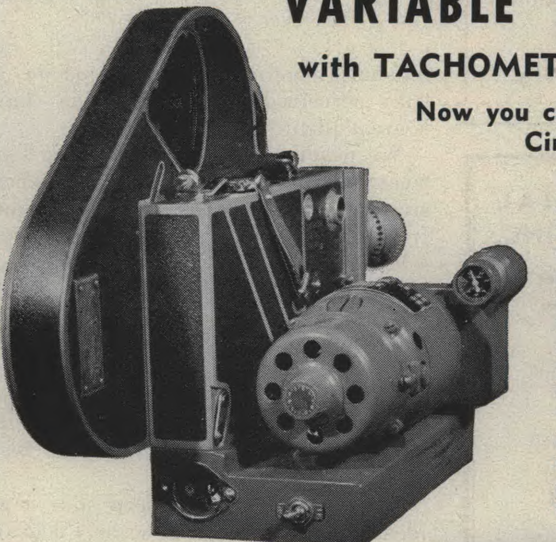

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name a few, also are reported working on the project for some time and probably have reached the same stage of development with their systems as the Crosby engineers.

Some Hollywood engineers feel that the present Crosby system is not too well adapted yet to practical feature film production because of the frequency range which the system is presently using; also because of the high rate of linear speed which the tape must travel. However, the Crosby engineers already are at work on a complete new model of their "electronic camera" which reportedly will surpass in result that already demonstrated by the camera which they exhibited in the demonstration last month.

The actual manufacture and general demonstration of the new Crosby system will be deferred for at least six months, during which time it will be standardized for use with a new one-inch magnetic tape. This tape, the developers claim, will be more receptive to all color methods with a definition increase brought about through use of added magnetic power. As the Crosby organization now sees it, the new recording system will be farmed out for manufacture, with the company handling distribution.

"Keep Calm! We'll take the women and children AFTER we've saved the KINEVOX!"*
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PUTTING THE PICTURE ON PAPER

(Continued from Page 497)

in sharp conflict with other people as truly perceived as he is, you may have a great picture.

We never work much preparing long treatments, believing that a comprehensive treatment saps some of the vitality from an idea. That is, if you do it yourself. Once, however, Wilder and I were given a 40-page sketch called "Memo To A Movie Producer." It had no plot whatever, but presented a background brilliantly—a little town the other side of the Mexican border; where refugees from Europe waited to get into the United States. It grew into *Hold Back The Dawn*.

Mostly, we've developed our own ideas. For instance, one scene I'd heard about developed into *To Each His Own*. It showed a middle aged woman walking down a station platform where a troop train was pouring young American soldiers into London. She was calling the name of one of them—uncertain whether she would recognize his face. He was the son she had given up when he was a little boy.

Sunset Boulevard came about because Wilder, Marshman and I were acutely conscious of the fact that we lived in a town which had been swept by a social change as profound as that brought about in the old South by the Civil War. Overnight, the coming of sound had brushed gods and godesses into obscurity. We had an idea of a young man happening into a great house where one of these ex-goddesses survived.

At first we saw her as a kind of horror woman—an embodiment of vanity and selfishness. But Wilder, as a director, has an uncomfortable peculiarity: he likes to see characters as they are going to be on the screen before he fignishes a script. I think we started *Sunset* with sixty completed pages. As we went along, our sympathies became deeply involved with the woman who had been given the brush by thirty million fans. At the end, we had to give her the only happiness we could see for her—the twilight happiness of the mad.

Of course, if you are working from a play or novel, a great deal of explatory work has been done for you. The easiest script I ever worked on—the one that took the shortest time—was *The Lost Week End*. In his novel, Charles Jackson had provided us with a tragic protagonist—a man in love against his will, in love with a bottle. He had also set the pattern of the seven circles of hell through which such a man can pass in a brief time. It was a question of effectively dramatizing those seven circles, of finding the picturizable opponents of that desire of Don Birnam's for drink.

After this length of time I'd have to take a copy of the book and the script and compare them, to say what was Charles Jackson's and what was ours. The bottle in the chandelier was ours, I know. The delusion Don Birnam suf-

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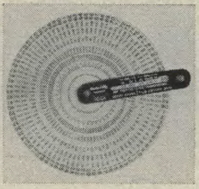

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fered—the hideous fight between the mouse and the bat—was his. Whether the scene of Don begging the prostitute for money for drink was even indicated by the novel, I can't say.

I devoutly wish more people would write novels alive with truth and pity. So do all motion picture producers. Alas, they are rare indeed.

The medium of the motion pictures imposes on its practitioners a more sub-stained obligation to hold the audience's interest than any other medium. The novelist can end his chapter, the playwright can drop his curtain. The motion picture writer is on for an hour and a half or two hours.

What he writes must be playable. It must be believable, it must have variety. You can't photograph people with the same expression on their faces too often. It must have architecture — a beginning, a middle, and an end. Above all, it must move, must take advantage of the freedom of the camera. The best play photographed just as it was written, seems stagnant.

Finally, it must have some of the freshness and unexpected quality of life, not be a rehash of old celluloid.

It's up to the producer to see that these things are in the script. No wonder he sometimes finds himself a little weary at the end of the day.

FILMING THE CIRCUS

(Continued from Page 495)

problem of keeping the camera from interfering with spectators' view of the circus," said Barnes. "Most of the time the camera was mounted on a giant Chapman crane fitted with a 30-foot extension. Where possible, we kept the chassis of the crane in one of the exit areas around the circus and, with the boom raised high, we shot from practically any vantage point we desired. So carefully was camera operation planned and executed during the regular show takes, that we never once received a complaint from the circus management."

The tremendous concessions made Paramount by the circus were reciprocated in part by DeMille's decision to employ a second camera unit to augment Barnes' crew. Directed by Peverell Marley, A.S.C., the second unit usually covered important action from another angle, making it unnecessary to slow up schedules by getting such shots in a subsequent setup, as would have been necessary with one camera on the scene.

After the company had concluded its initial seven weeks' shooting at Sarasota, it returned to Hollywood where scenes were shot that did not demand the actual circus locale. Months later, the company rejoined the circus in New York and traveled with it to Philadelphia, and Washington, D. C. The lighting and camera techniques which had been developed during the filming at Sarasota worked equally effective when shooting with the circus on the road. However, the company was put to a greater test because it became necessary to integrate its work with that of the circus crew, striking and packing its equipment at the end of a show, and unpacking and erecting it when the circus reached its new destination.

With all the preparations made by the studio and with Technicolor coming through with its new low level color film, George Barnes relates he spent many anxious hours awaiting the first dailies from Hollywood. But his apprehension was quickly allayed by the first day's rushes, which were screened in a local theatre in Sarasota. On the road, dailies were usually screened in some local theatre, following advance arrangements made by the studio. Thus it was possible to keep in just as close touch with the photographic results as when working at the studio in Hollywood.

During all shooting, Cecil DeMille was at George Barnes' side. He became virtually the circus' fourth ring — a relentless, tireless figure, constantly on the move in the steaming heat of the big top. Daily during the circus shooting, he could be seen peering through the camera viewfinder with the savage determination of an errant Watson on the search for melodramatic clues. In getting these ideas on composition, he became an object of considerable wonderment to spectators.

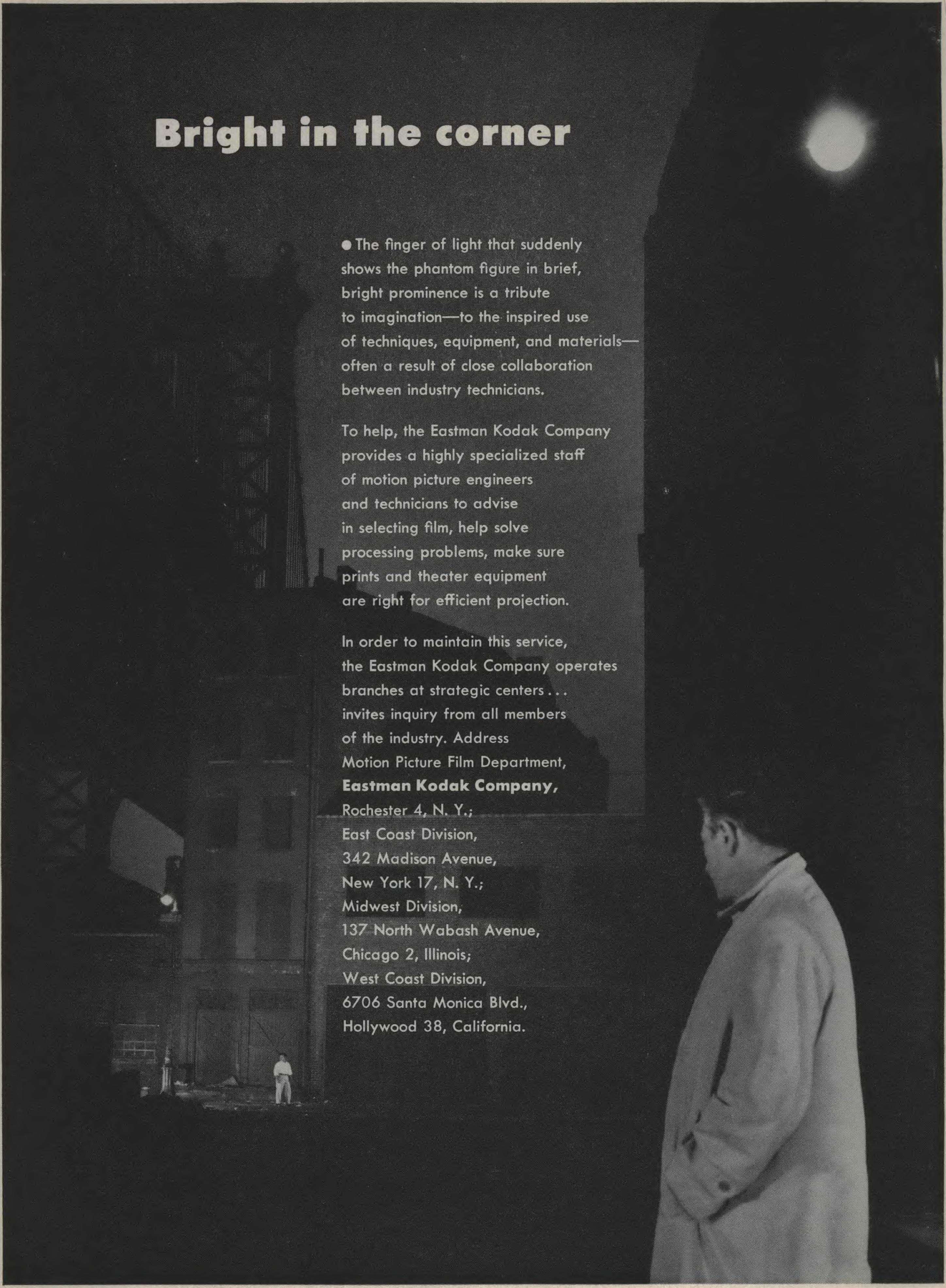
We leave it to the picture itself to prove how superbly DeMille and cameraman Barnes worked together to catch the very soul of the circus on celluloid; how completely unified must have been their thinking to create the finest pictorial rendition of the circus ever to be brought to the motion picture screen.

PRIZE-WINNING FILM

(Continued from Page 515)

toward a career in photography ever since. If the Army doesn't get him, John hopes to have his newest film completed and ready to enter in American Cinematographer's 1952 competition which begins December 1st.

NOTE: *American Cinematographer* is indebted to the *Atlanta Journal and Constitution Magazine* and to Miss Olive Bell Davis for their permission to draw upon facts and statements contained in Miss Davis' article (which appeared in the July 8, 1951, issue of that publication) describing the filming of *King Bookie*.—EDITOR.



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